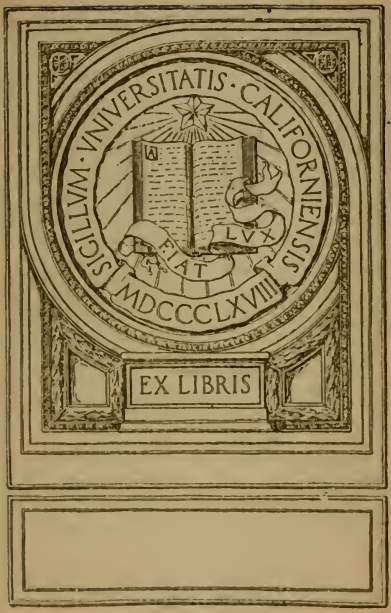
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ÆGEAN
ARCHÆOLOGY

ÆGEAN ARCHÆOLOGY

AN INTRODUCTION TO THE ARCHÆOLOGY OF PREHISTORIC GREECE. BY H. R. HALL, M.A., F.S.A. WITH MANY ILLUSTRATIONS AND A MAP

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TO

JOHN H. SKILBECK

TVEDT, 1914

PREFACE

IN this book I have endeavoured to give as succinctly as possible a general account of the remains of the ancient Aegean civilization of the Bronze Age, the dominant culture of prehistoric Greece, which has been revealed to us by the excavations of Schliemann, Evans, Halbherr, and others, at Mycenae, Knossos, Phaistos, and many other sites in Greece and the Aegean islands, especially Crete, during the last forty years. Historical conclusions have been omitted from consideration, as my own views as to the "pre-history" of Greece have already been expressed in another work.[1] This book is concerned only with the archaeological discoveries, the actual results of excavation, and the purely "cultural" conclusions which we may draw from them. The evidence of Greek legend has been touched upon only as illustrating these conclusions, and not in connexion with history, as this lies outside the scope of the work.

The general matter of the book being mainly concerned with the Aegean civilization properly so-called, *i.e.* that of Crete, the islands, and Southern Greece, the subsidiary or rather parallel cultures brought to light by work at Troy, in Northern Greece, and in Cyprus have been treated simply in connexion with the Aegean culture, which at Troy considerably affected the native civilization, in Northern Greece replaced it at a very late period, and in Cyprus overlaid it. The non-Aegean phases of these cultures have not been

[1] *The Ancient History of the Near East* (London, 1913).

illustrated, but the peculiar pottery of Northern Greece has been described (p. 76). The remarkable mid-Greek "Minyan" pottery has been illustrated as well as described (p. 82 ff., Figs. 22, 23), as, though its non-Aegean character is certain (it is closely related to that of Troy), its users were so closely connected with the Aegeans as to make it inadvisable to omit it in a general description of the chief ceramic art of prehistoric Greece.

As regards the illustrations, I have endeavoured to give within a moderate compass as many adequate pictures of the works of Aegean art and craft as was possible. It was impossible to illustrate all of even the most intrinsically important objects, and in a general work which is not primarily concerned with the first works of art, many objects of little historic importance but of interest as illustrating the life of the people must be included. This reduces the space allowable for the finer things. I have therefore thought it best to go upon the principle of illustrating among the major objects those more recently found which have not often been illustrated before, and more especially those of American and foreign discovery which are either little known or entirely unknown to the English general reader, though they will be known to the special student. So I have repeated but few of the illustrations of Schliemann's finds, which are well known from the great explorer's works, from their condensation in Schuchhardt's *Schliemann's Discoveries*, and from Tsountas-Manatt's *Mycenaean Age*, but have been enabled to illustrate liberally Sir Arthur Evans's discoveries at Knossos, and have fully illustrated the American work in Crete and the recent German finds at Tiryns. I have also included several recent Aegean acquisitions of the British Museum, hitherto unpublished.

I am under many and great obligations to the several

explorers and the organizations which have financed exploring work for permission to use their illustrations. First and foremost I desire to thank Sir Arthur Evans and Messrs. Macmillan for the liberal permission they have accorded me with regard to the illustrations of the Knossian excavations that have appeared in the *Annual* of the British School at Athens. I have also to thank Sir Arthur Evans and the Council of the Society of Antiquaries for similar permission in regard to Sir Arthur's publication of the *Prehistoric Tombs of Knossos*, in *Archaeologia*, Vol. li. Then the Committee of the British School at Athens have equally generously given me full facilities with regard to illustrations of discoveries by Messrs. Bosanquet and Dawkins at Palaikastro; and Sir Arthur Evans and the Council of the Hellenic Society, as regards illustrations from Sir Arthur's publications of "Cretan Pictographs" and "Mycenaean Tree and Pillar Cult," of Mr. Hogarth's finds at Zakro, and of other work published by the Society. My special thanks are due to Dr. Georg Karo for the loan of the blocks of several illustrations of the work at Tiryns and Kakóvatos published in the *Mitteilungen* of the German Institute at Athens, as well as for permission to copy others; and to Dr. Rodenwaldt for his kind assent to my republication. Prof. Halbherr, too, I have to thank for leave to republish some of the Italian finds. To my friend Mr. Seager and to the directorates of the Philadelphia Museum and the American School at Athens I owe many thanks for full permission to republish illustrations of the work at Pseira and Mochlos, and to Mrs. Boyd-Hawes for similar permission in respect to her fine publication, *Gournià*. The director of the Ἐφήμερις Ἀρχαιολογικὴ and Dr. Hatzidakis have given me permission likewise in regard to the latter's publication of Tylissos; and the firm of Eleutherodakis and Barth, of Athens, and Professor Dörpfeld in regard to illus-

trations from the latter's work, *Troja und Ilion*. To Mr. John Murray I tender my thanks for his kind permission to publish tracings of his publication of the Cupbearer Fresco in the *Monthly Review* of 1901, and of the Mycenaean grave-stele illustrated in Schliemann's *Mycenae and Tiryns*, Fig. 140; and to the Director of the Metropolitan Museum of New York for permission to publish the Cypriote bronze vase-rim in his collection (Plate XVIII). Finally I have to thank the Trustees of the British Museum for the loan of illustrations of their Cyprian treasures; Dr. Budge (to whom the inception of this book is due) and Mr. Arthur Smith for leave to publish certain objects in their departments of the Museum; and Messrs. Methuen and Co. for their kind assent to my republication (in a different size) of two of my photographs (Plates XV and XVI), which have already appeared in *The Ancient History of the Near East*. Due acknowledgments are given with the description of each picture in the list of illustrations.

Mr. Wace has read the paragraphs dealing with his Thessalian discoveries and the Minyan pottery, and Mr. E. J. Forsdyke has read the whole proof of Chapter IV, dealing generally with the pottery, which he has made his special study; I wish to thank him for several suggestions. I am indebted to him, to Mr. Noel Heaton, and to my friends W. R. Nicholson and G. A. Stübel for several photographs.

H. R. HALL

Tvedt, Omvikdalen, Norway.
July, 1914

CONTENTS

CHAPTER		PAGE
I.	INTRODUCTION	1
II.	THE EXCAVATIONS AND THEIR RESULTS . .	7
III.	STONE AND METAL	44
IV.	POTTERY	70
V.	TOWNS, HOUSES, PALACES, FORTRESSES, ROADS, ETC.	112
VI.	TEMPLES AND TOMBS	145
VII.	DECORATION, PAINTING AND SCULPTURE, SMALLER ART	178
VIII.	THE HIEROGLYPHIC SYSTEM; WEIGHTS AND MEASURES	211
IX.	COSTUME, ARMOUR, WEAPONS AND TOOLS; SHIPS; DOMESTIC ANIMALS, ETC.; CONCLUSION	233
	APPENDIX: SHORT BIBLIOGRAPHY . .	261
	ADDENDUM	264
	INDEX	265

ILLUSTRATIONS

PLATE IN COLOURS

PLATE

I. Knossos: Snake Goddess (Polychrome Faience). From the reproduction in the Ashmolean Museum . . . *Frontispiece*

PLATES IN HALF-TONE

FACING PAGE

II. Mycenae: The Lion Gate . . . 8
The Postern 8

III. Mycenae: In the Grave-circle . . . 10
Orchomenos: General View of the Excavated Area . . . 10

IV. Mycenae: View of the Akropolis from the West, Crete . . . 12
Houses of the Minoan Town, Palaikastro 12

V. Mycenae: The Pillars of the Treasury of Atreus 14

VI. Crete: Doorway of the Royal Tomb, Isopata 16
Orchomenos: Doorway of the Treasury of Minyas 16

VII. Tiryns: The Gateway 18
A Corridor 18

VIII. Knossos: The Long Corridor of the Magazines 26
The Stepped Theatral Area . 26

IX. Phaistos: The Upper Hall . . . 30
The Theatral Steps . . . 30

X. Hagia Triada: The "Agora" 32
Foundations of "Achaian" Palace above Minoan Building 32

PLATE		FACING PAGE
XI.	Crete: Goulàs, General View	34
	A Street in Gourniá	34
XII.	Crete: The Island of Mochlos	36
	The Haven and Town of Pseira	36
XIII.	Cyclades: Marble Vases, Pyxis, and Cup; Pottery Vase	48
XIV.	Early Sculpture from Cyclades and Crete (Koumása)	50
XV.	Gold *Repoussé* and its Steatite Imitation	56
XVI.	Hagia Triada: The Boxers Vase	60
XVII.	Hagia Triada: The Harvesters Vase	62
XVIII.	Cyprus: Rims and Handles of Bronze Vases	66
XIX.	Praying Woman, Bronze	68
XX.	Early Cycladic and Minoan Pottery	72
XXI.	Minoan Pottery	78
XXII.	Cyprus: Faience Rhytons from Enkòmi	106
XXIII.	Crete: General View of Gourniá	116
XXIV.	Crete: General View of Knossos and its Surroundings	118
XXV.	Knossos: Magazine with Pithoi	120
	The Great Stairway	120
XXVI.	Knossos: Bird's-eye View of the Eastern Slope	122
	Excavating the Western Palace	122
XXVII.	Argos: The Lárissa and Aspis	124
	Knossos: The Throne of Minos	124
XXVIII.	Crete: The Hagia Triada Sarcophagus, sides	174
XXIX.	Crete: The Hagia Triada Sarcophagus, ends	176
XXX.	Phylakopi: The Flying Fish Fresco	184
	Knossos: The Ivory Leapers	184
XXXI.	Mycenae: The "Siege Cup" Fragment, silver	198
	Fragment of Stone Relief	198
XXXII.	Mycenae: Bezel of Gold Ring	206
	Knossos: Pottery Fragment with Shield and Spiral Decoration	206
XXXIII.	Knossos: Cretan Clay Tablets	220
	Phaistos: The Phaistos Disk (obverse)	220

ILLUSTRATIONS IN THE TEXT

FIGURE		PAGE
1.	Obsidian core and stone celt, Crete . . .	46
2.	Copper dagger blades, Crete. SEAGER, *M.* .	47
3.	Stone vases and lid. SEAGER, *M.* . . .	50
4.	Gold-work from Mochlos and Enkòmi. SEAGER, *M.*	52
5.	Silver cup and polychrome ware cups. *Gournià.* .	54
6.	Two-handled cup, Mycenae. From reproduction in British Museum	56
7.	Steatite pyxis fragment: procession of youths. EVANS, *B.S.A.* ix	64
8.	Obsidian vase, Tylissos. HATZIDAKIS . .	65
9.	Lamp of purple gypsum, Isopata. EVANS, *P.T.* .	66
10.	Steatite flower vase	66
11.	Flower vase, later type	66
12.	Bronze cauldron, Tylissos. HATZIDAKIS . .	67
13.	Pig of copper, Enkòmi. *E.C.*	67
14.	Bronze figure of a man, Tylissos. HATZIDAKIS .	68
15.	Bronze weight in form of a calf	69
16.	Early incised pottery, Crete	71
17.	Kamárais pottery, Palaikastro. *B.S.A.* ix . .	77
18.	Middle Minoan pithos, Phaistos. After a photograph by W. R. NICHOLSON	79
19.	Kamárais ware. SEAGER, *M.*—M.M.III, faience cup, Knossos, EVANS, *B.S.A.* ix; M.M.III, lily vase, EVANS, *B.S.A.* x; M.M.III, "trickle" vase, *Gournià*	81
20.	Birds on Melian vase	85
21.	Melian frescoes: swallow and dolphin. *Phylakopi* .	86
22.	Minyan goblet. WACE	87
23.	Minyan kantharos, restored	88
24.	Trojan silver vase. By courtesy of E. J. FORSDYKE, *J.H.S.* xxxiv	89
25.	Octopus vase. *Gournià*	90
26.	L.M.I. jugs and "fillers," from Pseira, Palaikastro, and Gournià. SEAGER, *P.*; *B.S.A.* ix; *Gournià*	91

FIGURE		PAGE
27.	L.M.I. jug. *Gournià*	93
28.	L.M.I. "filler," Palaikastro. *B.S.A.* ix	95
29.	Bronze bowl (Knossos) and Bügelkannen. EVANS, *P.T.*	97
30.	Three large painted vases (L.M.II), from Isopata. EVANS, *P.T.*	99
31.	Mycenaean kalyx, Curium. *E.C.*	104
32.	Mycenaean amphora, Cyprus. *E.C.*	104
33.	Mycenaean "filler," Hala Sultan Tekke. *E.C.*	105
34.	Late Mycenaean krater, Enkòmi. *E.C.*	105
35.	Late Mycenaean krater, Enkòmi. *E.C.*	106
36.	Bird-vase, Palaikastro, Crete (L.M.III). *B.S.A.* ix	106
37.	Late Mycenaean kalyx and krater, Palaikastro, Crete. *B.S.A.* ix	108
38.	Late Mycenaean lebes, Palaikastro (Kouraménos), Crete. *B.S.A.* ix	108
39.	Ordinary utensils, cooking pots, etc., 1 and 4, DÖRPFELD. 2, 3, 5, and 6, *Gournià*	109
40.	Pottery censer or chafing dish, Zafer Papoura, Crete. EVANS, *P.T.*	110
41.	Pottery lamp, Crete	111
42.	Plan of house, Knossos town. HOGARTH, *B.S.A.* vi	114
43.	Faience model of house. EVANS, *B.S.A.* viii	115
44.	Plan of Gourniá. *Gournià*	116
45.	Sections of excavations and of eastern portion of Palace, Knossos. EVANS, *B.S.A.* ix, viii	121
46.	Plan of part of the building on the eastern slope, Knossos. EVANS, *B.S.A.* viii	127
47.	Plan of Tiryns. RODENWALDT	133
48.	Tower of Sixth City, Troy. DÖRPFELD	140
49.	Gate of Sixth City, Troy. DÖRPFELD	141
50.	Horse on shipboard. EVANS, *B.S.A.* xi	143
51.	Procession with chariots, from a Cyprian vase. *E.C.*	144
52.	Larnax from Milatos. EVANS, *P.T.*	151
53.	Religious dance on ring, Mycenae. EVANS, *T.P.C.*, *J.H.S.* xx	152

FIGURE		PAGE
54.	Votive double axe, Dictaean cave. HOGARTH, *B.S.A.* vi	153
55.	Pottery household deities and trumpet. *Gournià*	154
56.	Ivory sacred knot, Knossos, EVANS, *B.S.A.* ix	155
57.	Intaglio seal, water-demons. EVANS, *T.P.C.*	157
58.	Plan of royal tomb at Isopata, Crete. EVANS, *P.T.*	163
59.	Longitudinal section of a tholos-tomb (Treasury of Atreus)	165
60.	Transverse section of a shaft-grave, Zafer Papoura. EVANS, *P.T.*	168
61.	Plan of chamber-tomb, Zafer Papoura. EVANS, *P.T.*	169
62.	Transverse section of pit-cave, Zafer Papoura. EVANS, *P.T.*	171
63.	Pottery bath-larnax. *Gournià*	173
64.	Painted stucco floor at Tiryns, after RODENWALDT, *T.*	181
65.	Painted steps at Tiryns. RODENWALDT, *T.*	182
66.	Corner of room with dado, Tiryns. RODENWALDT, *T.*	184
67.	Cat fresco, Hagia Triada. *Mon. Ant.* xiii	185
68.	Miniature fresco, Knossos. EVANS, *J.H.S.* xxi.	186
69.	Warrior fresco, Mycenae. RODENWALDT, *A.M.*	187
70.	Fresco of huntsmen, Tiryns. RODENWALDT, *T.*	188
71.	Cup-bearer fresco, Knossos. *Monthly Review*, March, 1901	189
72.	Fresco of a girl, Knossos. EVANS, *B.S.A.* vii	190
73.	Frescoes of the hunt, Later Palace, Tiryns. RODENWALDT, *T.*	191
74.	Chariot fresco, Later Palace, Tiryns. RODENWALDT, *T.*	192
75.	Fresco of boar hunt, Later Palace, Tiryns. RODENWALDT, T.	193
76.	Fresco of the priestess, Later Palace, Tiryns. RODENWALDT, *T.*	195
77.	Bull's head, Knossos. EVANS, *B.S.A.* vi	197
78.	Stone grave-stele, Mycenae. SCHLIEMANN	199

FIGURE		PAGE
79.	Head of ivory leaper. EVANS, *B.S.A.* viii . .	201
80.	Ivory mirror-handle, Enkòmi. *E.C.* . . .	202
81.	Ivory mirror-handle, Zafer Papoura. *P.T.* .	203
82.	Carved ivory staff-head, Kakóvatos. *A.M.* xxxiv	204
83.	Ivory roundel, Enkòmi	204
84.	Lentoid seal-intaglio, Knossos. EVANS, *B.S.A.* viii	206
85.	Early trapezoidal seal, Crete. EVANS, *C.P.* .	206
86.	Carnelian signet, Crete. EVANS, *C.S.* . .	207
87.	Carnelian signet, Crete. EVANS, *C.S.* . .	208
88.	Sealings from Zakro. HOGARTH, *J.H.S.* xxii .	209
89.	Early seal, Crete. EVANS, *C.P.* . . .	215
90.	Carnelian seal-stone with pictographs. EVANS, *C.P.*	215
91.	Carnelian seal-stone with pictographs. EVANS, *C.P.*	215
92.	Hieroglyphic inscription, Enkòmi. *E.C.* . .	223
93.	Haematite weight	231
94.	Clay sealing, showing Minoan male costume. Zakro. HOGARTH, *J.H.S.* xxii. . . .	234
95.	Restored fresco from Tiryns, showing Mycenaean male costume. RODENWALDT, *T.* . .	235
96.	Petsofà figurine, man. *B.S.A.* ix . . .	236
97.	Petsofà figurine, woman (reconstructed). *B.S.A.* ix	237
98.	Clay head of a man. SEAGER, *M.* . . .	238
99.	Woman from a Knossian fresco. EVANS, *B.S.A.* viii	239
100.	Mycenaean beads. EVANS, *P.T.* . . .	241
101.	Gold mask from the fifth grave, Mycenae. From reproduction in British Museum . .	243
102.	Bronze greaves, Enkòmi. *E.C.* . . .	246
103.	Seal-impression, warrior with shield. EVANS, *B.S.A.* viii	246
104.	Minoan bronze swords, Zafer Papoura. EVANS, *P.T.*	248
105.	Hilt of bronze sword, Zafer Papoura. EVANS, *P.T.*	249
106.	Bronze spearheads, Zafer Papoura. EVANS, *P.T.*	250
107.	Bronze arrowheads, Zafer Papoura. EVANS, *P.T.*	251
108.	Bronze double axe, Troy. DÖRPFELD . .	252

FIGURE		PAGE
109.	Bronze sword of Shardana type	252
110.	Bronze knife, Crete	253
111.	Seal-impression, sailor and sea-monster, Knossos. Evans, *B.S.A.* ix	255
112.	Fresco of a goat, Tiryns. Rodenwaldt, *T.*	260

MAP

Map of the Aegean Lands, with inset maps of Crete and Central Greece . . . . *Folded at end*

COVER DESIGN

Faience relief plaque of Ibex with young, Knossos. Candia Museum. From reproduction in the British Museum.

ABBREVIATIONS

In acknowledging the sources of the text illustrations in the above list, the following abbreviations are used :—

B.S.A.	*Annual* of British School at Athens
Dörpfeld	*Troja und Ilion*
E.C.	Murray, Smith and Walters, *Excavations in Cyprus*
Evans, *B.S.A.*	*Annual* of British School at Athens
„ *C.P.*	*Cretan Pictographs* (*J.H.S.* xiv.)
„ *C.S.*	*Further Discoveries of Cretan Script* (*J.H.S.* xvii.)
„ *P.T.*	*Prehistoric Tombs* (*Archaeologia*, li.)
„ *T.P.C.*	*Mycenaean Tree and Pillar Cult* (*J.H.S.* xxi.)
Gournià	Boyd-Hawes, *Gournià*
Hatzidakis	Hatzidakis in 'Εφ. 'Αρχ., 1912
J.H.S.	*Journal* of the Hellenic Society
Mon. Ant.	*Monumenti Antichi*, xiii
Rodenwaldt, *A.M.*	*Athenische Mitteilungen*, xxxvi
„ *T.*	*Tiryns*, ii
Schliemann	*Mycenae and Tiryns*
Seager, *M.*	*Mochlos*
„ *P.*	*Pseira*
Wace	Wace, Droop and Thompson, *Excavations in Thessaly*

Aegean Archaeology

CHAPTER I.—INTRODUCTION

THE scientific research of the last thirty years has brought about a revolutionary change in our knowledge of Greek archaeology. Not even the criticism of the Biblical record has compelled us so radically to revise our ideas as have the discoveries of Schliemann, of Halbherr, and of Evans in Greece. These discoveries have revealed to us the archaeology of prehistoric Greece, the Greece of the Heroic Age before Homer. If we look at the Greek histories of thirty years ago, we find their writers when dealing with the beginnings of Greek culture talking, under the influence of the philological theories of Max Müller, Sanskrit rather than Greek. Yet the historians of that day were not to blame, for they had no staff of actual archaeological discovery upon which to lean; they knew nothing of the actual life of the ancestors and the predecessors of the Greeks, as we do now. Archaeology then came to the rescue of history from the morass into which philology had dragged her. And the result is seen in the Greek histories of to-day, whose tale of the earliest Greece is very different.

The present book is an introduction to the archaeological *data* of Greek "pre-history," to the archaeology of prehistoric Greece. It deals with the life and arts of the early Aegean peoples, as known from the excavations; our scanty Greek historical knowledge with

regard to these *data* and the historical theories that have been based on this knowledge and the study of the remains here described, are excluded from its purview.[1]

It is impossible to understand the archaeological results properly unless they are fitted into some sort of working chronological scheme. Such a scheme may be, as in the case of American and Scandinavian archaeology, largely hypothetical, or, as in the present case of Greece, one which, while still in details hypothetical, and in no sense "history," is in its broad lines trustworthy, since it is ultimately based on the known contemporary records of another people, which enable us to date its own products in historical order, and with them the Greek remains that have often been found in association with them. These records are those of Egypt.

Our knowledge of Egyptian archaeology is now sufficiently detailed to enable us to say, in most cases with certainty, that such-and-such a kind of pot or weapon belongs to such-and-such a period of Egyptian history, just as we know a piece of Tudor furniture from one of the time of Charles II. And, with Egyptian help at the beginning, we have now succeeded in doing much the same with the remains of early Greek civilization. Our knowledge is most complete as regards pottery, so much so that the chronological scheme depends ultimately upon Egyptian datings of Aegean pottery, and the gaps are filled in largely by means of the results derived from the study of the development of pottery. Of the development of weapons too our knowledge is considerable. We now know that such-and-such a pot or weapon belongs to such-and-such a period of the Bronze Age culture of Greece, since each period had its distinctive styles, and we can trace the

[1] For my own views on the probable *history* of the Aegean culture I may be permitted perhaps to refer the reader to my recently published book, *The Ancient History of the Near East* (Methuen, 1913).

passing of one style into another, the genesis of new styles and the disappearance of old ones. This has only been rendered possible by the large amount of archaeological evidence which the discoveries described above have amassed. This enables us to sift our evidence as carefully as we have done in the case of Egypt, so that now we know so well the distinctive features of at any rate the later periods that we can tell when a pot does not belong to the period of other things with which it may have been found, just as we know that a Queen Anne sixpence does not belong to the same period as some mediaeval coins into whose company it may have found its way. The archaeological dating of objects does not depend upon "stratification" alone. It is the fact that we now know that the vast majority of objects found in a single stratum of an ancient town-site do belong to the period of that stratum. Objects which have "worked down" from higher strata are by no means so common as might be thought, and our knowledge of the higher strata in the same place or of strata in other places which would correspond to them enables us to recognize intruding objects very easily. With stratification alone as our guide, however, we might still make serious mistakes, though happily ignorant of them. We might not mistake the sequence of strata, but we might easily go wrong over the time-intervals that they represent, for instance. It is otherwise when we have, as in the present case, datable evidence from Egypt, a country whose history is known from literary sources, to help us.

Using this Egyptian evidence as his guide, and checking the results of excavation with its aid, Sir Arthur Evans finds that the Bronze Age pottery and with it the general culture of Crete divides itself into three main chronological periods: Early, Middle, and Late, each of which again is divided into three sub-periods. To these periods of the Early, Middle, and Late Bronze Age he

has given the name " Minoan," after the great Cretan lawgiver and thalassocrat of tradition.[1] Professor Ridgeway objects to the name,[2] because in legend the two Minoses (he is convinced that two kings of the name were carefully distinguished from each other) are connected with the later Achaian ruling houses, who belong to the very end of the period only (if indeed they do not come after it), and not with the Pelasgi, to whom the greater part of the Bronze Age culture is to be assigned. For him Minos was the destroyer rather than the creator of the " Minoan " culture. But the question is one of names only, and, as Professor Ridgeway's position is disputable, there can be no objection to the retention of a name which, though it may be fanciful, is convenient. We cannot properly speak of " Knossian " periods, because many of the Minoan periods, though represented at Knossos, are far more fully represented elsewhere in Crete. And we cannot speak of " Early Cretan," " Middle Cretan " and so forth, without the addition of " Bronze Age," when the term at once becomes clumsy. So we continue to use the term " Minoan," which has universally been adopted, with the chronological scheme which it denotes. For the sub-periods numbers are used, and we speak of " Early Minoan I," " II," " III," " Middle Minoan I," and so on, abbreviating them for convenience to the phrases " E.M.I, II, III," " M.M.I, II, III," and " L.M.I, II, III."

For the Cyclades a corresponding scheme of successive periods of development has been worked out, which we know as " Early Cycladic I " (E.C.I), and so on, till in the Late Minoan period the Cycladic culture was absorbed in that of Crete.

[1] *Essai de Classification des Epoques de la Civilisation Minoenne*, London, 1906.

[2] " Minos the Destroyer," *Proceedings of the British Academy*, Vol. IV (1910).

An absolutely corresponding scheme for the Greek mainland cannot be devised. Fimmen[1] has lately proposed to use the terms "Early," "Middle," and "Late Mycenaean" for three periods corresponding in time to M.M.III, L.M.I, II, and L.M.III respectively, but here "early" does not correspond in time to "early" in Crete and the Cyclades, and it would seem best to refer to these periods as the First, Second, and Third Mycenaean (Myc.I, II, III). The two latter are so strongly influenced by the contemporary Cretan culture that their products are practically identical in style with those of "L.M.I to III," and it is quite usual to extend the term "Minoan" to the mainland, and to speak of "Myc.III" pottery as "L.M.III," though it may have been made as well as found in Greece proper. Objects of this period found in the islands, as for instance at Ialysos in Rhodes, may quite as correctly be called "L.M.III" as "Myc.III." The pottery found by Petrie at Tell el-Amarna in Egypt (p. 22) may be designated by the one term or the other as we think it more probable that it was made in Greece or in Crete. But, owing to uncertainty on this point, it seems best to use the Cretan term generally, and, unless we are dealing with objects actually found at Mycenae, to call everything of the latest period "L.M.III."

The nett archaeological result is that we now know that the Late Bronze Age in Greece, the "Great Palace Period" of Knossos and Phaistos and the succeeding "Mycenaean" period, was contemporary with the XVIIIth and XIXth Egyptian Dynasties, and so probably lasted from about 1600 to 1200 B.C., while the Middle Bronze Age was contemporary with the XIIth and XIIIth Dynasties (central date *c.* 2000 B.C.), and the Early Bronze Age with the preceding

[1] *Zeit u. Dauer der kretisch-mykenischen Kultur* (1909).

dynasties of the "Old Kingdom," the time of the Pyramid-builders (central date *c.* 3000 B.C.).

The Egyptian history on which these dates are founded will be found treated in connexion with theories of Greek pre-history in my *Ancient History of the Near East*. For further details I would refer the reader so far as the Late Minoan period is concerned to my previous book, *The Oldest Civilization of Greece*, and on the whole subject to Dr. Fimmen's recent work, *Die Zeit und Dauer der kretisch-mykenischen Kultur*.

CHAPTER II.—THE EXCAVATIONS AND THEIR RESULTS

THE new discoveries of the earliest age of Greece are chiefly associated with the name of Schliemann, and rightly so, as his work first revealed prehistoric Greece to us. But since his time a totally new face has been given to our knowledge by the Cretan discoveries of Evans and Halbherr, which has rendered out of date all books on the general subject published before 1902. The new prehistoric Greece is very different from the old one of the two decades succeeding Schliemann's discoveries. He, however, was the pioneer, and his finds explained various isolated discoveries made before his time, chiefly of vases, which it had been impossible to bring into any intelligible relation with our knowledge of the relics of classical antiquity. Best known to us of these are perhaps the vases of Ialysos in Rhodes, presented to the British Museum by John Ruskin in 1870. Excavations at Santorin had produced vases and other objects from ancient houses which must have dated before the great eruption which divided the original island into Thera and Therasia. This catastrophe had been dated by the geologists to about 2000 B.C.; but the archaeologists were by no means inclined to accept such a date as probable, though it has since been proved by archaeological evidence to be not very wide of the truth. Vases found at Melos had been at Sèvres and others from Cephalonia at Neuchâtel since the 'forties, which we now know to be "Mycenaean," but then were unplaceable. The same was the case with

various vases and other objects of the Egyptian prehistoric period which existed in our museums before their chronological position was discovered by de Morgan in the 'nineties; they had been classed as Roman, Coptic, what not, even dismissed as modern forgeries. But "many shall go to and fro, and knowledge shall be increased." Schliemann went to and fro, when he was able to realize his life's dream of excavating Troy and Mycenae, and the result was such an increase of archaeological knowledge as the world had not previously known.

The romantic career of Schliemann is well known to all who are interested in archaeology, and there is no need to recapitulate it here. When the poor boy who had bribed the drunken journeyman to spout Homer to him, and had wept bitterly because he could not understand the meaning of the divine words, had become the wealthy merchant able to justify the desire of his boyhood, to dig up Troy, he went to Troy in 1875 and dug it up. He may have dug it badly: he had nothing but his own sense to guide him, and modern archaeological training did not then exist. But he did what nobody had thought of doing before, and the result was something that nobody had expected. With the excavation of Troy this volume has no direct concern: it belongs to the archaeology of Asia Minor, not of Greece. With Schliemann, we pass on to Mycenae. Here his results were really startling, and attracted much more attention than the Trojan relics, which were after all not to be brought into connexion with anything Greek. But at Mycenae in 1878 Schliemann really did for a while seem to have, as he himself believed, disinterred Agamemnon, Klytaimnestra, and all the court of the golden Atridae. Commotion is the only word that can describe the state of the scholarly mind at the discovery—commotion, and with many almost angry scepticism. The things were Byzantine;

they were treasure buried by marauding Avars and Heruli; and so on. To students of European prehistory the fact that the new discoveries belonged to the Bronze Age was quite enough to give them their proper place in time, but some classical scholars, who were still under the impression that the Greeks of the fifth century used bronze swords, were not so easily adaptable. Others, however, realized the real importance of the finds at once, and opinion of real weight and importance soon crystallized into the view, which has been entirely justified by the Cretan discoveries, that, while not belonging to the Homeric period, the new discoveries were relics of a pre-Homeric culture of which reminiscences are seen in the poems; that they belonged, in fact, to the Heroic Age.

It had always been the opinion of the Greeks that the ruins of Mycenae and Tiryns belonged to the Heroic Age. The Lion Gate, never buried under the earth, spoke to them of a most ancient art and an architecture different from theirs; the "Treasury of Atreus," as they called it, they regarded as one of the wonders of the world (which it is); the rugged galleries and casemates of Tiryns, open then as now, had been built for King Proitos by the Kyklôpes. Of the moderns none doubted their early date, but to talk of the Heroic Age was to invite many a smile in the days when every legend was deemed a sun-myth. Schliemann showed that the Greeks were right, dealing a death-blow to "Max-Müllerism" in Greek studies and turning historians to a more scientific consideration of the legends.

There was no doubt as to the position of Mycenae, as there had been about that of Troy. The Lion Gate (Pl. II, 1) was there, marking the ancient site which since 456 B.C. had been desolate. Schliemann passed through and struck spade into the earth beyond it in the year 1878 A.D. Immediately beyond the gate was a circular space enclosed by weather-worn and lichen-

covered stone slabs. Within this stone circle Schliemann dug and discovered what he hoped to find: the graves of the heroes of Mycenae mentioned by Pausanias.[1] For we now know that the personages here buried must have lived in the earliest days of the civilization that came from Crete to the mainland, when Tiryns and Mycenae, probably, were founded. The Greeks knew that those who were buried here were the greatest heroes of ancient Mycenae, and so they called them Agamemnon and his court. Pausanias says there were six graves. Schliemann found five, and then stopped. After he left a sixth was found.

The diggers came first, at a depth of 12 to 14 feet, upon a round altar, and a number of stelae or tombstones, some rudely sculptured (Fig. 78), standing on the same level as a great circle, 87 feet in diameter, of weather-beaten stone slabs, which evidently formed the *Temenos* within which the tombstones had stood (Pl. III, 1). The slabs, mostly about 3 feet high, are arranged in two parallel rows, across which top-slabs were placed horizontally. It has usually been supposed that the slabs enclosed a wall of rubble, forming the revetment of a mound which rose above the graves. Of this, however, one sees no proof. Why should the stelae be thus buried? The stone circle, too, has an entrance open towards the Lion Gate. It seems obvious that it is the boundary of a holy place, within which stood the altar and stelae, marking the position of the graves below. They are cut in the solid rock; above them was heaped a mound of earth, which was saved from slipping down the slope of the hill by a genuine revetment, a great wall of Cyclopean blocks, which may or may not be an extension outwards of the original line of the citadel. On this real mound stood the *hieron* with its stelae, open to all. There is no need to suppose a further mound above all. Whether the ancient *hieron*

[1] Paus., II, 16.

Photos. H. H.

MYCENAE

1. In the Grave-Circle ×

ORCHOMENOS

2. General view of the excavated area

was entirely covered by detritus when Pausanias visited Mycenae, or whether he is merely telling us a tradition of his time that six graves of the heroes lay below, we do not know. But such a tradition may very well have persisted down to his time, and he may not have seen the relics that Schliemann brought to light.

On the stelae[1] are rude representations in relief of men driving in chariots to the hunt, with spiral decorations in the field. Though crude in execution, they bear signs of belonging to the same period as the graves, and they are probably the original monuments set up on the mound.

The famous shaft-graves are alike in plan, though differing in size. Each is a rectangular pit some 12 to 15 feet deep, and varying from 10 to 20 feet in length and from 9 to 16 feet in width. The bodies and the objects buried with them lay upon a bed of pebbles. The wealth buried with them astonished the world. There is no occasion here, if there were space enough, to recapitulate the various contents of the several graves. This has been done several times; for the fullest description, apart from Schliemann's own, I may refer the reader to Schuchhardt's *Schliemann's Discoveries*. The vases of gold and silver, the marvellous inlaid swords and daggers, of gold and silver and copper on bronze, the finger-rings (Pl. XXXII, 1) and bracelets, the thin gold ornaments that ornamented the clothing of the dead and the masks of gold that covered their faces (Fig. 101); all these are known by repute, at least, to all who take even the slightest interest in archaeology. It was undoubtedly, at its time, the most "sensational" archaeological find that ever had been made. Since then, however, we have been well used to extraordinary archaeological discoveries, from that of the royal mummies at Dêr el-Bahri in 1881 to that of Knossos and the Cupbearer Fresco and the inscribed

[1] Schuchhardt, *Schliemann*, Figs. 145–7.

tablets in 1901. The unique marvel of the Mycenae find has been eclipsed. It remains, nevertheless, one of the most important discoveries of past human civilization that ever has been made.

The wealth of the precious metals discovered rendered insignificant the pottery that was also found in the graves. But as a matter of fact this pottery is of very considerable archaeological interest, throwing light, as it does, upon the precise period when the heroes of Mycenae were buried and the relations which they maintained with the Cyclades and with Crete. The Cretan Bronze Age culture was, however, unknown in 1876, and the pottery was disregarded.

As to the rank of the personages buried here there can be no doubt. They were kingly and evidently the first great lords of Mycenae. What legend said with regard to them was approximately true, though no doubt they have been fitted with names and identifications which belong to a much later time than that in which they really lived. Most of them were men, and warriors, as the splendid swords and the shield-bosses shew, and as all of kingly blood had then to be. The strange masks may really give some idea of the faces of the dead. Women there were also; the First and Third Graves contained only the remains of women buried with the articles of their queenly adornment and their diadems and earrings of gold. The Fourth Grave, the largest and richest of all, probably contained male bodies only, as Schliemann thought. It has since been supposed that of the five bodies here interred two were women, but this only upon a most flimsy piece of evidence: the presence in the grave of golden hairpins, some 3 or 4 inches in length. "Objects like hairpins," says Schuchhardt, "and a large massive bracelet have been found, which can only be regarded as articles of feminine apparel; yet the whole feminine outfit which we became acquainted with in Graves I and II is far

Photo. G. A. Stübel

Photo. H. H.

MYCENAE

1. View of the Akropolis from the west

PALAIKASTRO, CRETE

2. Houses of the Minoan town, looking towards the Grandes Islands

from being complete here ; we notice more especially the absence of earrings and of the large breast-pendants." Precisely ; and the obvious conclusion is that there were no women buried here. The bracelet in question is so massive that it was probably a man's, and hairpins are no proof of sex for an age in which men wore their hair as long as women. I suppose then that all the persons buried in this grave were men. From that grave came some of the finest objects of gold and the finest swords, and we cannot doubt that they were the highest of all in rank. The occupants of the Fifth Grave were also men : in this grave was found the famous dagger with the inlaid picture of the cat hunting wild-fowl,[1] an obvious adaptation of an Egyptian motive.

The Sixth Grave was found a year after Schliemann had left Mycenae. He had counted Pausanias's list of graves as five, not six ; and so, when he had found five graves, he stopped. The contents of the Sixth Grave are exhibited in the Museums of Athens exactly as they were found, the objects not being distributed among their respective sections of pottery, gold-work, etc., in the Museum. The occupants were all men, and with them was buried pottery of the " Cycladic " type resembling that from Melos.

Outside the grave-precinct was found amid house-ruins a stone chamber, possibly a cellar, into which had been placed a remarkable treasure of gold, consisting of solid drinking-cups, and some fine signet-rings, which are famous on account of the curious religious scenes engraved upon them. With these were found the fragments of a vase which is famous because it shews us a procession of warriors who wear the Greek panoply,[2] of which this is the oldest appearance. It has usually been

[1] Schuchhardt, *Schliemann*, Fig. 270; Perrot-Chipiez, Vol. VI; Pl. XVII, 1.

[2] Schuchhardt, *Schliemann*, Figs. 284, 285.

supposed that this "Warrior Vase" must date to a late period, almost to the dawn of the historic age; but the treasure found with it is of the ancient prehistoric type, notably the rings. It may be that these were heirlooms, and that the find is dated by the "Warrior Vase" to quite a late period, far later than the epoch of the shaft-graves. On the other hand, we cannot ignore the possibility that even at that early time some of the Northern Greeks may already have worn the panoply, and have been very differently attired for war from the Cretan Minoans whose culture, as we see from the contents of the shaft-graves, they had so largely adopted (see p. 244).

† The lower town of Mycenae stretched for some distance from the citadel (Pl. IV, 1), along a ridge which on one side descends gradually to the plain, on the other sharply to the ravine up which runs the modern road from Phykhtia. Looking out over the ravine are the two great "beehive tombs" or *tholoi*, known as the "Treasuries of Atreus and Klytaimnestra." The existence of these *tholoi*, and their reputed purpose as treasuries, was known to Pausanias, who mentions them. The "Treasury of Atreus" had always been known and open, but was now finally cleared by Schliemann; that of "Klytaimnestra" was discovered by him now, and partly excavated at the expense of his Greek wife. The first is in comparatively perfect preservation, wonderful to relate; the second, smaller and less well built, has suffered: the crown of the *tholos*-roof having fallen in. Atreus's Treasury has indeed lost the two great pilasters of grey-green stone that seemed to support the heavy architrave of its entrance-door, but the loss is hardly noticed, so impressed are we at first visit by the tremendous character of the building itself. The interior, though but 50 feet in height, is more impressive than anything Egypt has to show, and far more impressive, in my opinion, than the interior chamber

British Museum

MYCENAE

THE PILLARS OF THE TREASURY OF ATREUS

of the Great Pyramid. For here we have an art of building more developed than that of Egypt. But of this more later. The missing pillars (or the greater part of them) may be seen in the British Museum, and it is a curious story how they came there. At the beginning of the nineteenth century they were transported from Greece to Ireland by the then Marquess of Sligo, and remained unknown at his country-seat in the West till about ten years ago, when their true character was recognized, and they were very suitably presented by the present Marquess to the British Museum, where they now form the chief monument preserved in the Archaic Room (Pl. V). The columns are restored to show their original height, and the proper places of the few fragments that still remain in Greece (one formed the doorstep of a mosque in Turkish Athens for many years) are indicated by painting in drab colour, the portions of which no original fragments have been recovered remaining plain white. In the *dromos* or entrance-corridor of Klytaimnestra's tomb were found the remains of the pottery funerary offerings of later generations, and also a burial pit, which may have been the grave of a woman as in it were found fragments of mirrors and gold ornaments ; the ivory handles of the mirrors were carved with figures of palm-trees, women holding fans, and so on, in the peculiar orientalizing style which is known also from the precisely similar objects found in Mycenaean tombs in Cyprus and now in the British Museum (Fig. 80). Their date seems to be considerably later than the epoch of the shaft-graves and probably this grave is of later date than the tomb itself. When this burial was made the *dromos* was probably closed up with a wall of *poros* stone, which still remained in part when the tomb was excavated. It must, however, have been partially broken down very soon in order to allow of the dedication of the offerings,

which comprise votive pottery of a date later than that of the grave in the *dromos*.

From Mycenae Schliemann went to Ithaka, where he found some Cyclopean buildings, and thence to Troy, not resuming his Greek excavations till 1880, when he cleared the "Treasury of Minyas" at Orchomenos, a "beehive tomb" of exactly the same type as those at Mycenae, and obviously of the same date (Pl. VI, 2). In legend Orchomenos, like Mycenae, was famous, and Homer celebrates its wealth of gold. Both were evidently places of great importance and centres of civilization and power in prehistoric days, and the similarity of the great tombs in both places points to their contemporaneity and to their connexion with one another. Pausanias knew the "Treasury of Minyas" well, and says that it, like Tiryns, is no less noteworthy than the Pyramids of Egypt. It was, when complete, but a little smaller than the "Treasury of Atreus" at Mycenae, and even in its present ruin one can see that it was in no way inferior to it in grandeur of design. Unhappily its roof has fallen in, and an ignorant fanatic of a demarch named Madakis, in 1862, utterly destroyed the *dromos* to build a church with its stones, notwithstanding the fact that there were already two churches at Skripou, the neighbouring village: a typical example of modern Greek absurdity in religious matters.

"Beehive tombs" naturally attracted a great deal of attention at this time, when their prehistoric position had been made clear by Schliemann's discoveries. Already in 1872, one previously unknown had been found at Menidi (Acharnai) in Attica; in the chamber were found votive objects of late Mycenaean type, and in the *dromos* pottery of Geometric (Dipylon) and later styles. This seems to show that this tomb was made in late-Mycenaean times. And during the 'eighties many were excavated, notably those at Dimini in Thessaly and Vaphio in Lakonia, which yielded results of the

Photo H. H.

ISOPATA, CRETE

1. Doorway of the Royal Tomb

ORCHOMENOS

2. Doorway of the Treasury of Minyas

highest importance to our knowledge. To these we shall soon come.

Almost contemporaneously with Schliemann's excavation of Mycenae, a tomb of different type was discovered at Spata in Attica. This was a rock-cut grave of several chambers, approached by an inclined passage, corresponding to the *dromos* of a "beehive tomb." In this tomb, which had been rifled, were found, besides the skeletons, many interesting remains, especially ornaments of glass-paste, thin gold, and ivory; notably a curious little male head of ivory, bearded and wearing a helmet. A similar head was found later at Mycenae, and another in Cyprus.[1] The little glass-paste "Oriental" sphinxes and other objects of the same material found are typically "Mycenaean" in character. The pottery dates the tomb of the later Bronze Age, much later than the Mycenae graves.

In 1882 Schliemann went to Troy again, and resumed his excavations, in company with a German architect, Dr. Dörpfeld, whose help was of the greatest value. Schliemann himself was no architect, and was not even a scientifically-trained observer. His natural common-sense stood him in stead. But he was often too downright in his methods, and might at times be accused of vandalism in the pursuit of his end—the discovery of the Heroic civilization of Greece. He cut through everything ruthlessly to get down to the stratum he wanted. Dörpfeld was a guarantee of more scientific methods, necessary on a site like Troy, with its superimposed strata of different ages of settlement, very different from the simple grave-clearing at Mycenae. The result of the renewed work was eventually the discovery of the "Mycenaean" city of Troy.

This, however, was not the work of Schliemann, but of Dörpfeld, and the discovery was not communicated

[1] See p. 244.

to the world till the 'nineties—after Schliemann's death. The great explorer interrupted his Trojan work in 1884 to go to Tiryns.

The fortress which the Kyklôpes built for Proitos still stands conspicuous, in spite of its small size, in the plain of the Inachos. In reality so small that a few big trees of the English kind would hide it effectually (and even the Greek cypresses do mask it), it yet gives the impression of a Gibraltar. This is chiefly due to the enormous and impressive size of the huge boulders of which much of its wall is built. It has been impossible to destroy Tiryns. Its galleries are simply built of these boulders piled up to form a rude arch (Pl. VII, 2). If they are displaced they merely come to rest in a new combination; they are almost indestructible, even by earthquake. Centuries have reduced parts of the fortress walls to mere heaps of these displaced boulders, but the stones remain, and they would be Tiryns even if nothing of the galleries and casemates remained. In point of fact, however, very much remains in practically perfect condition, except, of course, that the whole of the plaster that originally covered up the rough stones, and filled up the gaps between them, has long disappeared.

The result of the excavations of 1884 and 1885 was the discovery of the ground plan of a palace within the walls, placed on the top of the long rock, sixty feet above the plain. Its entrance gate, with doorposts and threshold of breccia, is as huge as are the casemates. The plan of the palace itself shows that it was a building of later date than the wall-framework, and quite lately renewed excavations have brought to light the remains of a much earlier palace.[1] At Tiryns Schliemann found the famous kyanos-frieze, the remains of a carved alabaster slab-decoration inlaid with hard blue glass, which at once was identified as the Homeric

[1] See p. 131.

Photos. H. H

TIRYNS

1. The Gateway
2. A Corridor

kyanos. Here, too, were found fragments of wall-painting which gave a foretaste of what was to come at Knossos.

From Tiryns Schliemann and Dörpfeld went back to Troy. The Argolid saw further excavations, at Mycenae, in the years 1886–1893, when the Greek Archaeological Society worked there. They first attacked the acropolis of the town, above the Lion-Gate and the circle of graves. Below Roman and classical Greek remains the excavators came, at the summit of the hill, on the ground plan of a small palace much resembling that already discovered at Tiryns. We now see that it belongs to the same late Bronze Age period as the latter. It had been burnt, no doubt after it had been sacked and its valuables looted. Above it was built a crude structure over which was the Greek temple. Here we had a set of events which might be interpreted in the light of Greek tradition. And it seemed a most plausible theory that the palace was the home of the old Achaian kings, destroyed by the Dorians, who had erected over it the little building which in the sixth century was replaced by a Doric temple.

Many houses were excavated on the sides of the hill, and in them were found two interesting pieces of fresco-painting : a scene of ass-headed animals carrying a pole over their shoulders, and a scene of two women (perhaps priestesses) before a male god of war, represented as little more than a great 8-shaped shield of the usual type in vogue at the time, with head and feet (Pl. XXXII, 2 ; Fig. 103). The same deity appears on a gold ring from Mycenae. All these houses are built of small, rough stones bonded with clay ; the walls were probably covered with plaster. The rooms are small, the streets narrow and winding. This was the first discovery of a Bronze Age town. It has since been paralleled by the discoveries at Gourniá and Pseira in

Crete. The antiquities found were all of a comparatively late period of the Bronze Age.

Besides several new *tholoi*, a great number of lesser tombs were excavated by the Archaeological Society. These are all cut in the rock. The objects found in them of special importance are an ivory head of the same kind as one already found at Spata (p. 17), bronze fibulae and two iron rings, pointing to a late date; and a curious silver bowl with inlaid golden leaves and heads of men in gold and dark metal round its side.[1] Important objects from these diggings were scarabs and other Egyptian objects with kings' names of the XVIIIth Egyptian Dynasty, some found on the acropolis, others in the tombs and houses of the towns. These objects, whose names they bear, are contemporary with the kings from the time of Amenhotep II to that of Amenhotep III (*circa* 1450–1380 B.C.). They are therefore most important pieces of evidence for the determination of the date of the Greek Bronze Age, and were soon generally recognized as such.

In 1889 our knowledge of prehistoric Greek art took a great step in advance when the "beehive tomb" at Vaphio in Laconia was excavated by Mr. Tsountas for the Greek Archaeological Society, and the famous "Vaphio Cups" (p. 56, Pl. XV, 1) were found. The original impression, derived from the Mycenaean finds of 1876, of the golden wealth of the most ancient Greek civilization was revived by this find, which also convinced even those hitherto prejudiced against the new knowledge (of whom there were still many, both here and on the Continent) of the artistic force and originality of the most ancient Greeks. Later finds in Crete have shown us that they could make better things than the Vaphio Cups; but in 1889 these two little golden vases with their *repoussé* designs of men capturing bulls were regarded as extraordinary. It is

[1] Tsountas-Manatt, Fig. 117.

not too much to say that the Vaphio Cups recalled the flagging attention of the world of artists and archaeologists to the work of excavation in Greece. Big discoveries were now looked for. They did not come at once, but when they did the promise of the Vaphio Cups was more than fulfilled.

In 1890 and 1891 the "beehive tombs" at Thorikos in Attica and at Kampos in Messenia were excavated by Tsountas, and in the last-named was found the well-known leaden statuette of a man making an offering which has figured in so many books as a good illustration of Mycenaean male costume.[1] Rock-cut tombs of late date were also found about this time on the precipitous hill of Palamidi which overlooks Nauplia.

The next important event after the discovery of the Vaphio Cups was the identification of the Sixth Trojan City as Mycenaean, or affected by Mycenaean influence.

The earlier culture of Troy, as well as the later, is no concern of this book, but the Sixth or "Mycenaean" City is. It dates from the end of the Bronze Age, when the Greek culture which radiated from Crete had, in the modified form which it acquired on the Greek mainland, reached the northern coasts of the Aegean. Above the original neolithic settlement was built the important Second City of the early Bronze Age, with its rude Cyclopean walls and "palace" of North-Greek type, which Schliemann identified as the citadel of Priam. It is the Sixth City, however, which succeeded the second after its total destruction by burning (after an interval filled by three small village settlements in succession) that is undoubtedly the Troy of legend, round which gathered the traditions of the great siege. It was the only important settlement after the Second City, the succeeding settlements being unimportant and unjustified. Its date (*circa* 1400–1300 B.C.) is certain from the distinctive Mycenaean pottery

[1] PERROT-CHIPIEZ, *Hist. de l'Art*, VI, Fig. 355.

that was found in it. Schliemann, however, with his rough-and-ready methods, had not identified it. This distinction was reserved for Dörpfeld, and was the result of his more scientific operations. The discovery was announced in 1893.

This proof of the wide-spreading character of the Mycenaean civilization directed attention to evidence from Egypt of its extension even to the Nile land. In 1887 Petrie had discovered at Kahun in Middle Egypt foreign pottery which he unhesitatingly called "Aegean," and the later discoveries in Crete have proved that his diagnosis was right; his pottery, which was found in deposits of the XIIth–XIIIth Dynasty (before 1800 to *c.* 1700 B.C.) is of the type known to us now as "Kamárais" ware, from the name of a Cretan village below a cave on Mount Ida, where large quantities of it were found by Prof. J. L. Myres in 1898.[1] This ware is of the "Middle Minoan" period. In 1899 Prof. Petrie discovered at Tell el-Amarna—in deposits that can only belong to one period, the reign of the heretic King Akhenaten (*c.* 1380–1360 B.C.)—innumerable fragments of Mycenaean pottery of the type already found in the houses at Mycenae (see p. 19). Discoveries in a foreign settlement at Gurob, not far from Kahun, of the time of Thothmes III (*c.* 1500–1450 B.C.) had confirmed this evidence as to date.[2] There is of course no question of any extension of "Mycenaean" civilization *en bloc* to Egypt. The culture of Egypt was far too old and too stable to be affected by any foreign civilization except superficially.

Mycenaean pottery was also found at Sidon in 1885, and some ten years later the important discoveries of the British Museum expedition to Cyprus were made

[1] *Proc. Soc. Antiq.*, XV, p. 351 *ff.* Renewed excavations in the cave were carried on by the British School at Athens during 1913.

[2] For Petrie's discoveries see his *Illahun, Kahun, and Gurob* (1891) and *Tell el-Amarna* (1894).

at Enkómi, near Famagusta (Salamis). The unscientifically conducted explorations of di Cesnola had years before proved what an interesting field for archaeological research was to be found in Cyprus, and later on further research brought to light a whole series of antiquities of the early Bronze (or rather "Copper") Age, which made it possible to gain a general view of the development of early Cyprian civilization. These antiquities do not, any more than those of Troy, directly concern this book, as the culture which they represent had no more direct connexion than that of Troy with the prehistoric civilization of the Aegean. The early Bronze Age cultures of Troy and Cyprus can be seen to be much more closely connected with one another than either with that of the Aegean. Their relics belong to the antiquities of Asia Minor rather than to those of Greece. But towards the end of the Bronze Age Greek civilization reached Cyprus, as it reached Troy, and, as at Troy, superimposed itself upon the native culture. This is shewn by the excavations of the British Museum at Enkómi and Hala Sultan Tekke (near Larnaka), which have brought to light tombs filled with objects of Minoan or Mycenaean art, now mostly in the British Museum,[1] most of which cannot be later in date than the fourteenth and thirteenth centuries B.C. The Egyptian objects found with them are demonstrably of this date, and not later, being all of the late XVIIIth and the XIXth Dynasties. Rings of Akhenaten and a scarab of Queen Teie have been found here as at Mycenae, and fine Egyptian necklaces of gold also, which, from their style, one would adjudge to the XVIIIth or XIXth Dynasty. Probably, too, the greater part of the treasure of goldwork found in the tombs and now in the British Museum is of this early date. The golden tiaras and

[1] Published by the British Museum: MURRAY, A. H. SMITH, and WALTERS, *Excavations in Cyprus*, 1900.

bands (Fig. 4, 3) certainly seem to connect with those of the Mycenaean shaft-graves. But at the same time there are many objects of later date, such as a bronze tripod and other things,[1] which are demonstrably of the Dipylon period, and cannot be earlier than the tenth or ninth century. It is certain that the Bronze Age culture lasted longer in Cyprus than anywhere else in Greece. Excavations at Amathus conducted by Mr. A. H. Smith yielded many Egyptian scarabs of the XIXth Dynasty (*c.* 1320–1211 B.C.); so that the Amathus tombs partly bridge the gap between the earlier and later burials at Enkómi.

The earliest "Copper Age" antiquities of Cyprus were soon compared with objects of a similar stage of culture which had been discovered in the islands of the Aegean. To this earlier stage of the culture of Greece had been given the name "Pre-Mycenaean." This term is now disused, since the Cretan finds have cleared up the whole problem of the development of early Greek civilization. The early culture of the islands is of course "Pre-Mycenaean" in date, but now the word "Mycenaean" is usually restricted to the later development of the Cretan or "Minoan" culture on the Greek mainland, and it has become a misnomer to call the island culture by a name connecting it in any way with the "Mycenaean." The word "Cycladic" is now used, as the chief discoveries of this early stage of Greek civilization have been made in the Cyclades. Here, and especially in the islands of Amorgos, Antiparos, and Syra, numbers of primitive tombs built of large flat stones in the shape of cists were found, first by Dümmler in 1885 and by Bent in 1886, which contained skeletons buried in the contracted form characteristic of primitive peoples, with vases and other objects of stone and pottery of simple form (Pl. XIII), and

[1] Such are many of the objects depicted on pp. 15, 16 of the official publication.

evidently of much greater age than the ordinary remains of "Mycenaean" culture. The general *facies* of the remains placed them in the same stage of development as those found in the Second City at Troy, and the conclusion that they are roughly of the same date has been shewn to be correct by the continuous series of Cretan finds, which have welded our knowledge into a whole. The population of the islands at this period stood in the "Copper" period; they used weapons of copper, whereas at Troy bronze was already in use. Characteristic of the finds were vases in a form imitating the shell of a sea-urchin, and curious figures, probably representing the dead, sculptured in simple fashion of the shining white Parian marble (Pl. XIV).

At Melos evidence of a more developed "Cycladic" culture was found, with painted pottery, and this was at the same time connected with the "Mycenaean" and with the Cretan finds, which were now beginning. These discoveries were made in the excavations of the British School at Athens, under the direction of Mr. (now Sir) Cecil Smith, of the British Museum, at a site called Phylakopi, on the eastern coast of the island. These excavations began in 1896, and revealed the existence of a large Bronze Age town, which yielded a series of remains which enabled the archaeologists to trace the development of the "Cycladic" culture from an early period to its end. Luckily they were not fully published till the first Cretan discoveries had been made, and it was possible to identify many of the Melian finds as of Cretan origin, and to connect the culture-history of Melos with that of Crete.

The epoch-making discoveries in Crete dawned upon the world at the opening of the twentieth century. The "great Hellenic island" had always, in Greek legend, taken an important part strangely contrasting with its unimportance in later Greek history. That it had taken a very great part in the "pre-history" of

Greece was certain, and this fact was recognized nearly a century ago in the work of the German scholar Hoeck,[1] although he had no archaeological knowledge to guide him. What was known of Cretan archaeology in the 'eighties led another far-seeing German, Milchhöfer, to see as early as 1883 that Crete would surely prove to be, as Hoeck had affirmed, one of the oldest homes of Greek civilization and art.[2] The few early antiquities then known from Crete had about them an indefinable air of peculiarity and, if I may use the word, "distinction" which to an art-lover were certain signs of a yet hidden importance which would eventually come to light. Schliemann himself had had the idea of excavating Knossos, the Cretan site round which the legendary memories of a great past had most closely gathered, the site of the Labyrinth, the lair of Theseus's Minotaur, the seat of Minos the lawgiver, and of the ancient Cretan thelassocracy. The position of Knossos had never been forgotten, and the name was used as that of a Greek bishopric. In 1878 a Cretan who bore the name of the legendary lawgiver, Minos Kalochairinos, had dug on the hill of Kephala, where tradition placed Knossos, and had found there some of the great *pithoi*, the huge jars for oil or wine which Evans since has found stored in long lines (Pll. VIII, 1; XXV, 1) in the magazines of the palace which he has uncovered, the Labyrinth itself. Kalochairinos, however, got nothing more; one of his *pithoi* now stands with the Cretan antiquities in the First Vase Room of the British Museum. Schliemann intended to follow up his work, but difficulties ensued with the Turkish authorities in the island with regard to the acquisition of the site, and death carried him off before he could get to work. We may—with

[1] Hoeck, *Kreta*, Vorrede, p. 5: "Kretas Geschichte beginnt in so ferner Zeit, seine Glanzperiode gehört so hohen Alter an, dass es bereits schon sank, als das übrige Hellas erst aufblühte."

[2] Milchhöfer, *Anfänge der Kunst in Griechenland* (1883).

Photos. W. R. Nicholson

KNOSSOS

1. The long Corridor of the Magazines: Mt. Ida in distance
2. The Stepped Theatral Area

all respect to Schliemann's memory be it said—be not altogether sorry that his somewhat summary methods were not allowed by fate to be exercised on Knossos, and that it was written that not he, but the Englishman Evans, was to excavate the palace of Minos and the Italian Halbherr to disinter the companion palace at Phaistos. Both were, when they began their work, trained scholars and archaeologists, and the excavation of these two splendid monuments of the older civilization of Greece could not have fallen into more capable hands than theirs.

Inspired, probably, by Milchhöfer's little book, both men had early turned their attention to Crete as an archaeological field. Halbherr was first in the field. Apart from the fact that, of all the Greek lands, Crete most resembles Italy, the great island has always had an interest for Italians on account of the long connexion between it and Venice. For an Italian who, like Halbherr, comes from the border of the Veneto, Crete would always be interesting, especially for one who was an archaeologist. Halbherr followed the American Stillman in his Cretan enthusiasm; Evans followed Halbherr. Early in the 'nineties the then Keeper of the Ashmolean first visited Crete, and was from the first held by the glamour and charm, which, as all who have visited the island can testify, fascinate the Crete-farer on his first coming, and bring him back again and again, if fortune wills, to renew and extend his knowledge of it.

The travels of Evans in the interior of the island resulted in a collection of the remarkable lentoid seals of stone (p. 207) which are characteristic of Crete, and in these he observed constantly-recurring signs which could only belong to a system of "writing." These he reduced to order and system, and published as "Cretan Pictographs and a Prae-Phoenician Script" in the fourteenth volume of the *Journal of Hellenic Studies*,

together with a stone libation-table, bearing an undoubted inscription in the same signs, which had been found in a cave above the village of Psychro in the Lasithi group of mountains—the "Dictaean Cave." This important monument is in the Ashmolean Museum at Oxford. Then he determined to excavate Knossos, bought the land, and, when the improved internal conditions established by the expulsion of the Turks in 1898 allowed him to do so, in 1900 began the work.

The state of our knowledge of the Bronze Age civilization of Greece before this event may be seen from four books published between 1891 and 1901; first Schuchhardt's careful and orderly *exposé* of Schliemann's discoveries, universally known as "Schuchhardt's Schliemann"; then the fine "Mycenaean Age" of the Greek archaeologist Tsountas, translated into English by Prof. J. Irving Manatt (1897); and finally Prof. Ridgeway's *Early Age of Greece* and the present writer's *Oldest Civilization of Greece*, both published in 1901, when the Cretan excavations had just begun, but before their first results could be used. To estimate the difference which the new discoveries have made, these books should be compared with the various *exposés* of the Cretan work and of our new knowledge of prehistoric Greece generally which have appeared of late years, notably Prof. Burrows's *Discoveries in Crete*, Père Lagrange's *Crète Ancienne* (1908), M. Dussaud's *Civilisations Préhelléniques* (1910; 1914), and Dr. Fimmen's *Zeit und Dauer der kretisch-mykenischen Kultur* (1909).

Dr. Evans's exploration of Knossos was attended from the first by the most sensational results. The ancient seat of Minos lay but a little way beneath the surface of the hill of Kephala, and but little work was necessitated before there began to appear the series of remarkable discoveries, one after another, which have revolutionized our knowledge of early Greece. First the lower courses

of the palace-wall, and then the splendid fresco of the "Cupbearer" (Fig. 71), which was greeted with enthusiasm by the archaeologists, not for itself only as a priceless monument of "Mycenaean" art, but also because of its extraordinary resemblance to certain Egyptian representations in Theban tombs of the time of Thothmes III of foreign tribute-bearers, which those of us who knew both Mycenaean and Egyptian art had already decided in their own minds were pictures of "Mycenaean" Greeks and no others. All hesitation as to the central date of Mycenaean art vanished when the "Cupbearer" appeared. And it was not only the archaeologists who were impressed by this strange figure from the past of a young man stepping proudly along bearing a great wine-cup. The very workmen knew that something great had appeared. To them the Cupbearer was a Christian saint who had appeared out of the earth to greet the renascence of Crete, freed now and for ever from the blighting presence of Moslem authority. It was ghostly, this resurrection of the ancient hero: "*φαντάζει*," said the workman who guarded it by night, "the whole place spooks" (as Prof. Burrows felicitously translates). And the realm of fantasy seemed indeed to have been reached when the successive discoveries were made of the red bull's head in *gesso duro* (Fig. 77), fit monument of the lair of the Minotaur of the Throne of Minos, of the extraordinary frescoes of the bull-leaping sport of boys and girls,[1] the ladies watching it from the palace windows, and the crowd of men and women below (Fig. 68), and finally of the deposits of clay tablets, inscribed by means of the stilus with signs akin to those already noted on the seal-stones (p. 221, Pl. XXXIII, 1).

Each year archaeological attention was riveted on Knossos as discovery after discovery of the highest importance was made, and objects of the greatest

[1] *Anc. Hist. N.E.*, Pl. IV, 2.

artistic beauty were recovered and removed to the Museum at Candia, while the remarkable architecture of the palace itself swiftly appeared as the earth lying above it was removed. The long lines of magazines with their *pithoi* like those removed long before by Minos Kalochairinos, the *kasellais* or safes sunk in their floors (Pll. VIII, 1; XXV, 1), the sunken chambers of stone which have been called "baths," the slabs of shining gypsum that covered the floors, the splendid "Grand Staircase," the walls covered with mysterious signs among which figured the Double Axe, emblem of the Carian Zeus, the arrangements for sanitation and water-leading, all wrought up the interest of architects as well as archaeologists to the highest pitch; this was a new Mycenae, and far more than a new Mycenae, and the addition which it made to our knowledge of the early history of civilization was unique. What, too, could students of Greek religion do, but gasp at the faience group of the snake-goddesses (Pl. I), or those of Greek art, but stare at the little ivory figures of leapers? (Pl. XXX, 2.) And in these two cases the impressions given were diametrically opposed. We knew before that "Mycenaean" religion seemed un-Hellenic enough in outward form; the snake-goddesses more than confirmed this idea. But we also had seen that "Mycenaean" art, despite its constantly recurring crudeness and *bizarrerie*, was possessed by a spirit that was above all things Greek in its freedom and its love of beauty, and we could not but think that this spirit had descended from the older to the younger art of Greece. The Knossian discoveries deepened this feeling without question; the ivory leapers set the minds of the artists absolutely at rest. How could these two diametrically-opposed impressions be reconciled? They can easily be reconciled, as we shall see. Enough, and more than enough, was found in the first few years of the Knossian excavations to set the archaeologists

Photos. H. H.

PHAISTOS

1. The Upper Hall
2. The Theatral Steps

thinking and working with renewed energy at that most fascinating of all historical studies, the early history of Greek civilization. And the succeeding years, though not so prolific of sensational results, have still been to the archaeologist little inferior to the first in interest. A lull has now superseded in the work at Knossos. Sir Arthur Evans must have time to publish fully his discoveries, with the matured results of his study of them. Also one man cannot indefinitely bear the greater portion of the cost of such excavations, which have necessitated heavy architectural work to preserve them from the weather. But there is much more still buried beneath the soil at Knossos. The palace is not yet completely dug out. Probably its most important portion has been brought to light, but much more awaits Sir Arthur Evans's spade when he elects to take it up once more. And one can only hope that his trusty lieutenant and helper, Dr. Duncan Mackenzie, may assist him in the future as in the past.

Little less interesting than the British work at Knossos has been that of the Italians at Phaistos and at Hagia Triada. Phaistos (Pl. IX) was in legend one of the most famous cities of Crete, ranking next after Knossos. Its site was identified by the English naval officer Spratt, in the course of his extended explorations of Crete during the 'sixties. The acropolis, if we may so call it, of Phaistos stood upon the scarped eastern summit of a low hill which rises out of the valley of the river Mylopotamos, which drains the Messará or southern plain of Crete, a few miles west of the ancient Gortyna, the capital of the island in Roman days. Here the Italians began to work contemporaneously with Evans, and soon uncovered a " Mycenaean " palace but little inferior to Knossos in interest, and perhaps surpassing it originally in splendour. Certainly it had by far the finer position. While Knossos is placed upon a low eminence in a confined valley from which the sea,

only four miles off, is invisible, from the scarped hill of Phaistos one has, besides mighty Ida to the north, a magnificent view of the whole Messará up to the mountains of Lasithi, thirty miles away; to the south the jagged range of Kophinos cuts off any view of the sea. It was a truly regal site for a king's palace. And the palace itself was truly regal, with its magnificent stepped entrance, and its spacious halls and corridors, broader and not so labyrinthine as those of its rival. In objects Phaistos has not been by any means so prolific as Knossos, but many of those that have been found are of the first importance. Inscribed tablets turned up here too, but our attention is chiefly attracted by magnificent *pithoi*, often painted and of earlier date than most of those at Knossos (Fig. 18).

As one rides on eastward beyond Phaistos into the plain of Dibáki, another magnificent view unfolds itself. We see at the end of the olive-covered plain a sandy beach curving from south to north, in which the Mylopotamos loses itself before reaching the sea. Out in the bay swims the island of Paximádi, "the Cake," and to the north the beach is stopped suddenly by the foothills of a mighty mountain, the conical Kentros, between which and snow-covered Ida rises northward the fertile valley of Amári. Far westward goes the rocky coast, the cliffs ever mounting higher, to culminate in the sheer eyries of Sphakiá. It would seem natural that the kings who enjoyed the view from Phaistos would also love this view, and would build themselves a house from which it could be seen. This was so: on the last low hill from which the view can be seen the Italians discovered another palace, and there Halbherr and his assistants, Savignoni, Pernier, Paribeni, and others, have recovered a building (Pl. X), and in it objects of the first importance. I need here only refer to the splendid wall-paintings, notably (Fig. 67) that of a cat hunting in a wood (which at once recalls well-known

Photos. H. H.

HAGIA TRIADA

1. The "Agora": Mount Ida in background
2. Foundations of "Achaian" palace above Minoan building

Egyptian tomb-frescoes of hunting cats and also the inlaid decoration of the Mycenaean dagger-blade, already mentioned), and the three splendid vases of black steatite originally coated with gold-leaf, on which are sculptured in relief respectively a procession of harvesters (Pl. XVII), a king receiving in full dignity a warrior-chief as dignified as he, with his shield-bearing followers behind him (Pl. XV, 3), and a number of gladiators, some wearing a helmet of curiously Roman style, boxing with each other in the pillared court of some great palace (Pl. XVI).[1] These are great works of art, better than the golden Vaphio Cups which they imitated in gilt stone, and as good as or better than anything yet found at Knossos. They alone would suffice to put the Cretan sculptors of the Bronze Age in the first rank of their craft. Their date is the best period of Cretan art, probably about 1600 B.C. We need not speak further of other discoveries here: of the great *tholos* of a far earlier period with its ossuary of human bones, and of the later sarcophagus of pottery with its scenes of funeral rites at the tomb (Pll. XXVIII, XXIX). Nor need we speak of further finds at Phaistos, such as the clay disk inscribed with strange hieroglyphs stamped with dies upon the clay when wet; a message—for the writing is not Cretan—it would seem from some foreign country, probably Lycia (see p. 228). This discovery (Pl. XXXIII, 2) was made only six years ago (in 1908). It is an earnest of what may yet be recovered from the sites from which the Italians have obtained such splendid results.

These epoch-making discoveries soon brought other workers into the field. Somewhat unaccountably, the Germans did not follow up the work of Schliemann, and took no part in the work (though the omission has been compensated for by their recent brilliant finds at Tiryns). A Frenchman essayed a site, Goulàs, on the

[1] See later, pp. 61 *ff.*

north-eastern foothills of Lasithi, with regard to which Dr. Evans had reported hopefully some years before. But, despite the interest and obvious importance of the place, nothing but circumscribed ruins (Pl. XI, 1) were found: objects there were none. And further search by another Frenchman, M. Adolphe Reinach, has revealed nothing. The place had been absolutely left bare when its ancient inhabitants finally removed from it. Further triumphs were, however, reserved for British archaeology, and for America. Mr. D. G. Hogarth dug out the cave in Lasithi from which Dr. Evans had obtained the inscribed libation-table already mentioned, and from it recovered an extraordinary number of bronze votive offerings which had in olden days been dedicated by pilgrims in its holiest recesses. They were of far more ancient date than the relics of early classical days that had before been recovered by Cretan workers from a similar cave on Mount Ida, undoubtedly the cave in which, according to tradition, the infant Zeus had been suckled by the goat Amaltheia. The cave on Lasithi was the rival shrine, also connected with the worship of Zeus, which was known in antiquity as the "Dictaean"; Dikté being the mountainous and then thickly wooded eastern district of the island.

East of Dikté proper, the *massif* of Lasithi, lay the land of the Eteocretans, who still in classical days spoke no Greek. Here, on a conical hill, blocking the southern end of the open valley of Siteia, which still bears its ancient name (τῆς Ἰτείας), the indefatigable Spratt had identified the site of Praisos, the Eteocretan capital. And here an expedition of the British School at Athens got to work. It discovered few prehistoric remains, but among the trophies of later times were two inscriptions, supplementing a first which had been found previously, in the non-Hellenic tongue of the Eteocretans. The oldest of the inscriptions dates from the sixth century B.C.; the youngest from the third; the

Photos. H. H.

CRETE

1. Goulàs: general view
2. A street in Gournia

characters are Greek, but the language we cannot read. It is utterly different from Greek, and it does not look Aryan ; all the probabilities are in favour of its being related to the non-Aryan Lycian and Carian tongues, spoken in its near neighbourhood.[1] Its interest lies for us in the fact that it is probably the speech of the Bronze Age Cretans, the language of the pictographs and of the hieroglyphed tablets from Knossos.

The Eteocretan country seemed likely to produce Bronze Age antiquities of far greater importance than the few found at Praisos, and the British School next undertook (in 1903) the excavation of a site on the eastern coast, a few miles away, which bore the name of Palaikastro, commonly applied to ancient sites in Greece. Here their work was crowned with splendid success. A whole town of the later Bronze Age was uncovered (Pl. IV, 2), with quantities of pottery of style and age corresponding to that of the town of Mycenae and the majority of the sites already excavated in Greece proper (the splendid objects from Knossos and Phaistos seemed to be, and were, older, corresponding in day to those of the "Mycenaean" shaft-graves and the *tholos* of Vaphio). Also the exploration of a small site in the hills close by, called Petsofá, by Prof. J. L. Myres, resulted in the discovery of very interesting pottery votive

[1] R. S. Conway, *B.S.A.*, 1901–1902, pp. 125–156 ; 1903–1904, pp. 115–126. It should be stated that Prof. Conway prefers to believe that the language is Aryan. It is difficult for the non-philologist to see how it can be, and the historian and archaeologist is bound, on the grounds of his knowledge, to deny the probability that it is so. Prof. Conway will forgive me if I say that he ignores unduly the non-Aryan probability. One must take this probability into account, and study Lycian and Carian as well as "Indo-European" if one is to interpret Eteocretan. For the language may not be Indo-European, and in my opinion it most probably is not. For Prof. Conway, I suppose, it ought to be Indo-European, which he knows so well. For me it ought not to be, since all the historical probabilities are in favour of its being non-Aryan, like Lycian and Carian.

figures of men and women, of earlier date than the Knossian remains, and shewing fashions different from those of the great "Palace-period" at Knossos (Figs. 96, 97). Altogether, the work of the British School in Crete, under the successive directorships of Prof. R. C. Bosanquet and Mr. R. M. Dawkins, was brilliantly successful.

Meanwhile, on the coast a little further south, at the haven of Kato-Zakro, Mr. Hogarth had excavated a site of the best period, prolific of fine vases and innumerable clay impressions of seals; the latter had been cut in a style of most extraordinary *bizarrerie* and strange, almost perverted, power, which emphasized the "weird" side, already known, of this remarkable art of early Greece.[1]

We now come to the American excavations. In a district recommended to her by Dr. Evans, the northern head of the isthmus of Hierapetra, which divides Dikté from the Eteocretan country, an American lady, Miss Harriet Boyd (now Mrs. Boyd-Hawes), had, with assistance from the University of Pennsylvania, discovered interesting sites of the early Iron Age, and now, in 1903, found and excavated, with the assistance of Mr. R. B. Seager, a complete little town of the Bronze Age, close to the sea, on the site called Gourniá. This Cretan Pompeii now stands with its houses and streets open to the sky (Pl. XXIII), and bereft of its treasures of art, chiefly of pottery and of the best period, which are now in the Candia Museum. We can walk up its amazingly narrow little streets, looking into the rough-walled chambers of its houses as we go, till we reach the small open space at the top of the town-mound. Here better walls of ashlar masonry, a pillar or two, and an *exedra* mark the centre of the little provincial town, which gives us so good an idea of how the ordinary people of the Bronze Age lived (Pl. XI, 2).

[1] See p. 209.

Photo. G. A. Stübel

Photo. H. H.

CRETE

1. The island of Mochlos
2. The haven and town of Pseira

The setting is extraordinarily picturesque. Crete is usually beautiful, but this bit of coast is perhaps one of its most beautiful spots ; we see before us the shores of the Gulf of Mirabello (well so-named by the Venetians!) diversified with a hundred little coves and headlands jutting out into pellucid sea ; to the west rises snowy Lasithi, to the right the steep screes, much resembling Illgill above Wastwater, of the Eteocretan Hills, with, above all, the lofty Aphendi (" Lord ") of Kavousi, below which, across the flat isthmus, gapes in the mountain-wall a huge cleft, the Gorge of Monasteráki. Out at sea, beyond the little islet of Koumidi, rises an island, exactly like the Bass from this point of view, Pseira (" Louse ") by name. In reality Pseira is not so high as, and is much longer, flatter, and more accessible than, it looks. And on its southern shore Mr. Seager discovered later on another Bronze Age town (Pl. XII, 2), with little streets sloping steeply down to the sea by a little cove which once held the sea-boats of Pseira, a place which, in spite of its smallness and the tiny size of its harbour, cannot, it would seem, have been altogether inconsiderable in the old days. For in its ruins Mr. Seager found objects of art as fine as those from Gourniá, or finer. If the people who lived on this barren rock were mere fishermen, they were the most art-loving fisher-folk that ever lived ; not even the Japanese can have rivalled them in knowledge of and general preference for beautiful things.

Further east, on a small round island, Laputa-like, which however in ancient days was a peninsula, Mr. Seager has made further discoveries of importance. This is Mochlos (Pl. XII, 1), now well-known from the funerary furniture of thin gold which he found in its tombs, and for lovely little vases of parti-coloured stone, worked with the most cunning art to utilize the natural colours in the formation of design. These things are much older than those from Gourniá and

Pseira, dating from the early Bronze Age, and contemporary with the Second City of Troy.

This would seem enough indeed to have recovered from the one island of Crete, great though it is. But our tale is nowise ended. Space, however, forbids me to do more than merely refer in the briefest possible manner to the many minor excavations that have been carried on elsewhere in Crete. Most notable are those of a Cretan archaeologist, M. Stephanos Xanthoudides, an ephor of the insular antiquities, who has found at Koumása in the Messará and in the Eteocretan country relics of the earliest and of the latest ages of Cretan culture. Quite lately, too, the Director of the Candia Museum, M. Joseph Hatzidakis, has excavated an important little palace at Tylissos, not far from Knossos.

It will be observed that we can say nothing of discoveries in the western half of the island. West of the valley of Amári practically nothing has been found. It looks as if the wilds of Sphakiá and of the White Mountains above Khaniá were in those days untrodden, and that civilization had not penetrated into them. Still, on the north-western and western coasts there were in classical days ancient cities, such as Phalasarna, which ought to have had a history as ancient as that of Knossos or Phaistos. The land in which they lie is fertile, their havens were as good (or bad) as any further east. Yet no trace of Bronze Age remains has been found near them; only a mysterious seat, sculptured in the rock by Phalasarna, a throne for a god or his priest perchance, seems to go back to the older days of Greece. We can only hope that appearances are deceptive, and that the spade will yet uncover remains of the Bronze Age in the western provinces of the island. The fact of their non-occurrence hitherto is remarkable, and gives rise to much speculation.

We now leave Crete, to return to Greece itself. After the conclusion of the work at Troy, Prof. Dörpfeld

turned his attention to the elucidation of a problem of some interest, the question of the identity of the Homeric Ithaka with the island that now bears that name. Prof. Dörpfeld believes that Levkas is the real Ithaka, and carried out explorations there in order to find proof for his theory. But in view of the more pressing necessity of further German collaboration in the work of disinterring the oldest remains of Greece, it was with pleasure that one saw his excavations at the site most of all connected with German enterprise, Olympia, with the object of reaching the bottom of things there. Semi-elliptical stone houses of primitive type, but possibly of not very early date, were discovered in 1906. Then search was made for the Homeric Pylos, and excavations at Samikon and at Kakóvatos, on the borders of Elis and Messenia, were successful. Kakóvatos produced *tholoi* of the period of the "Mycenaean" shaft-graves, probably with fine vases of the Knossian style which the excavators believed to have been made on the spot in imitation of Cretan originals, but were more probably actual importations from Crete.[1] The work at Kakóvatos has been succeeded by renewed excavations at Tiryns, which have uncovered an earlier palace, contemporary with those of Crete, in which have been found fine wall-paintings of a modified Knossian style, and evidently of local workmanship. They are of two periods; in the first we have groups of warriors, in the later we see a woman or goddess in full "Palace" costume, and a boar-hunt to which young men or maidens (it is uncertain which) go out in chariots, accompanied by attendants with dogs. We have in these paintings a most interesting modification of Cretan art.[2] Orchomenos has also produced early remains of importance in the Bronze Age town-strata (Pl. III, 2), including semi-

[1] See p. 100; Müller, *Ath. Mitt.*, XXXIV, Pl. XVI *ff.*

[2] Rodenwaldt, *Tiryns*, II; see Figs. 70, 73–76, 95, below; pp. 188, 191–193, 195, 235.

elliptical houses like those at Olympia; and at Argos the Dutch have on the Aspis (Pl. XXVII, 1) found interesting early pottery (see p. 75).

Finally, we come to the latest and in some ways the most startling of all the discoveries. This is the fact, established by excavations in Boeotia, Phokis, and Thessaly, that down to the latest period of the Aegean Bronze Age, North Greece still remained in the Chalcolithic period. Excavations by M. Tsountas at Sesklo and Dimíni in Thessaly, and by M. Sotiriadis at Chaironeia in Boeotia, had revealed a Stone Age culture with remarkable painted hand-made pottery, resembling that from the neolithic sites of Southern Russia. The date of this was naturally assumed to be altogether earlier than the Bronze Age in Greece, and was equated with that of the Neolithic strata of Troy and Crete. But it is always unsafe to assume absolute contemporaneity of Stone Age with Stone Age and Bronze Age with Bronze Age, even in the same quarter of the world, especially when, as in this case, the neolithic products of the one country in no way resemble those of the other. Cyprus never seems to have had a Stone Age at all, properly speaking, but we cannot suppose that the island was uninhabited when Crete was using stone weapons and tools. In fact it is a mistake to suppose an universal Age of Stone all over one portion of the earth's surface coming to an end everywhere at the same time, and succeeded by a Copper and then a Bronze Age which equally came to their conclusions everywhere at the same time. Troy seems never to have had a Copper Age at all, but passed straight from the Stone period to that of Bronze; Cyprus and the Cyclades had a Copper Age; Egypt only reached the true Bronze Age—after long centuries of simple copper-using (though she knew both bronze and iron and occasionally used them)—not very long before she began commonly to use iron, and that was not long before iron began to be used

even in Greece. The work of man's hands do not develop evenly everywhere, and an invention of the highest moment may be disregarded by one people for hundreds of years after it has been adopted by a neighbour. So it seems to have been in Greece. The adoption of metal in the Aegean lands and in Southern Greece, which brought about the whole magnificent development of Aegean civilization, was not imitated in the north, and the men of Thessaly continued to use their stone weapons and their peculiar native pottery until the Bronze Age culture of the South had reached its decadence, and the time for the introduction of iron from the North had almost arrived.

As we have said, this was not realized by the first excavators in the North. M. Sotiriadis had found, it is true, with his neolithic remains two pots of "Cycladic" fabric which seemed to argue contemporaneity with the earlier Aegean Bronze Age; but it was reserved for British archaeologists, Messrs. Wace, Droop, and Thompson, to prove by their excavations of the *magoulas* or village-mounds of Thessaly and Phokis that it was not till the "Mycenaean" period that the Aegean culture, with its bronze, reached Northern Greece, and that before then there had existed no proper Bronze Age in the North. The remarkable remains of the northern stone-using culture are, then, not all contemporary with the Stone Age in the South; only the earliest of them are. The Cretan Stone Age never developed very highly; it was early supplanted by the introduction of copper from Cyprus. But the Northerners, without metal, developed their primitive culture more highly, especially in the ceramic art, and almost reached the height which was attained by the stone-users of South Russia, whose culture seems to have died out before metal could reach it. It was however impossible that the Northerners should be entirely without knowledge of the great civilization and art almost at their doors;

Aegean pottery must have reached them before the general civilization of the Aegean imposed itself upon them in the " Mycenaean " or Late Bronze Age. And that it did and left traces upon their pottery even in the earlier Bronze Age we see not only from M. Sotiriadis's find, but from traces of spirals, the most characteristic form of Aegean decorations, in the Neolithic decoration scheme, which was severely geometrical, thus differing *in toto* from that of the South. It is difficult to account for this isolation of Northern Greece from the Aegean culture-system for so long. The discoverers suggest that the mountain-barrier of Othrys, then probably covered by dense and impenetrable forest, may have barred the way to culture-influences from the South. But this would not account for the finds in Phokis and Boeotia, and the Aegeans were from the beginning seafarers who could easily reach the Pagasaean Gulf. The facts are very difficult of explanation.

A large number of sites of this Northern neolithic culture and its succeeding Chalcolithic development, which lasted down to the time of the Third Late Minoan period of the South, have been excavated, from Chaironeia, Schiste, and Drakhmani in Phokis through Lianokladhi in the Spercheios Valley to Rakhmani in Northern and Tsani Magoula in West-central Thessaly. Besides those mentioned, the chief sites are Dimíni, Sesklo, Zerelia, and Tsangli, all in Thessaly.[1]

We shall say little more in this book of this remarkable culture, since it does not properly belong to the realm of Aegean, but of Central-European, archaeology. Its pottery is totally different from that of the Aegean area, as different as is that of early Troy or of Cyprus, with which also we do not deal. The whole scheme of design, which is on the developed wares both polychrome and geometric, has no kinship with those of

[1] Wace, Droop, and Thompson, *Prehistoric Thessaly* (1912).

Crete or of Mycenae but resembles that of the Neolithic people of South Russia. And it may not be without significance that the Neolithic pottery of Northern Greece is closely akin in its style of decoration (though naturally not in the fabric of its pottery; this depended on the local clays) to other Neolithic ceramics of the South-east-Central European area, which extends from the Danube valley to Russian Turkestan, where the recent excavations of Mr. Pumpelly have revealed a Neolithic culture with a pottery whose decoration-characteristics closely resemble those of the Neolithic pottery of Northern Greece. Links between the two areas seem to be provided in part of Asia Minor east of the Trojan-Cypriote area of black, grey, and red wares, which are distinct both from the North-Greek and the Aegean ceramics. We may also postulate links as yet undiscovered from Southern Russia round the north of the Black Sea and Caspian.[1] However this may be, it suffices to draw attention to the community of ideas in the matter of ceramic decoration which prevailed at the same period of culture-development (and probably more or less at the same time) between the Northern Greeks of the Thessalian *magoulas* and the people of the *kurgans* of Turkestan; a community of ideas totally opposed to that of the Trojan-Cypriote and that of the Cretan-Aegean potters.[2]

With a reference to recent discoveries of Macalister and Mackenzie in Philistia, where at Gezer and at Askalon and other sites the discovery of sub-Mycenaean pottery has proved that the legendary immigration of the Philistines from Greece is no myth, we bring the description of the excavations to an end.

[1] Hall, *P.S.B.A.*, XXXI (1909), p. 311 *ff.*

[2] On certain historical conclusions that may be drawn from these facts, in connexion with the fact that the "Northern" or "Homeric" house-type of palace, seen at Mycenae and Tiryns, is first found in the Neolithic settlements of Thessaly, see *Anc. Hist. N.E.*, pp. 63, 64.

CHAPTER III.—STONE AND METAL

THE use of stone for tools and weapons does not seem to have been so general in early Greece as in Northern Europe. It may be that scientific exploration has been so generally devoted to the remains of the classical age, and lately, as we have seen, so much to those of the Bronze Age, that sufficient search has not yet been made for relics of the Age of Stone. These may later on be found everywhere in Greece; but the fact remains that in the Cyclades and also in Cyprus hardly any trace has yet been found of them, whereas in Asia Minor they are discovered everywhere. Lately a theory has been started which gives to the Egyptians the credit for the invention of copper tools and weapons,[1] But the source from which the early Egyptians obtained their copper can only have been—since the Black Sea coast seems too far away—besides the Sinaitic peninsula, Cyprus and the neighbouring coast of Syria. And the practical absence from the island of stone tools seems to show that the Cyprians used copper from the beginning, whereas the Egyptians passed through the Neolithic period before adopting copper. It is a natural conclusion that the Cyprians communicated the knowledge both to Egypt and to the Aegean, rather than that Egypt communicated it to both. The matter is arguable, but this seems the more probable theory of the two. The earliest Egyptian copper weapons are of the type characteristic of Cyprus.

This is also the case in the Aegean. Cyprus here

[1] REISNER, *Prehistoric Cemeteries of Naga-ed-Der*, I, p. 134.

interests us only as the probable source of the Greek knowledge of copper. Whether it came from Cyprus or from Egypt, so far as we know in Crete it supplanted an extensive use of stone, whereas in the Aegean islands we have no trace of a purely Stone Age. There is no doubt that the early Bronze Age in the islands was contemporary with the same period in Crete, so that we can only conclude that during the early Neolithic period the islands were uninhabited, and that it was only at the end of the Stone Age that they were first colonized, probably, judging from the resemblance of their early Bronze Age culture to that of Crete, from the great island to the southward. This conclusion is only provisional, and may yet be proved wrong by a discovery of purely Neolithic remains in the islands. Their earliest culture known was "Chalcolithic"; both stone and copper were used side by side.

Crete, however, had lived through a long Age of Stone before copper reached it. The site of Knossos, the palace of the Bronze Age kings, was occupied in earlier ages by a stone-using people. The Bronze Age deposit on the site is some 17 feet deep. Below this the debris of successive Neolithic settlements has been shewn by pits and soundings to be from 20 to 26 feet thick. It is improbable that we can guess at the period of time that is represented by this stratum, as all sorts of *imponderabilia* have to be acknowledged. Any calculation is untrustworthy. We can only say that the period was, apparently, a long one. Peoples in a semi-savage state of culture remain in that state for untold centuries, till some revolution in their ways starts their brains working, and a remarkable development results. This was the case in both Egypt and Crete in the fourth millennium B.C., when, practically contemporaneously, the use of metal became known to both countries, and civilization began to progress in a few centuries with giant strides till a

state of general culture had been attained in both which was inferior to our own only in complexity, in knowledge of mechanical appliances, and in political ideas. The Neolithic Cretan produced no implements of stone that can for a moment rival the wonderful knives of chert that the Neolithic Egyptian made; indeed it would have been difficult for him to have done so, as the Egyptian was easily first among all stone-using peoples in the art and mystery of flint-knapping. The Cretan used simple flakes and arrowheads of the Melian obsidian and rough stone celts (Fig. 1). The stone-using culture of Northern Greece produced weapons of local stone and flint or chert, the latter often imported. We find arrowheads, axeheads, celts, chisels, club-heads, saws, spearheads, and knives. The knives are often of obsidian. The arrowheads are of a hafted or of a barbed type; the latter probably belong really to the Bronze Age, and have been found at Mycenae. Hafted obsidian arrowheads have also been found at Athens. Such small weapons as knives and arrowheads were no doubt commonly made of stone, when metal had superseded it in the manufacture of all the larger arms and tools.

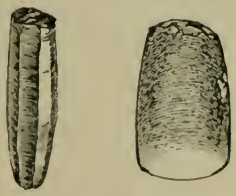


FIG. 1.—Obsidian core and stone celt; Crete. *British Museum. Scale* ½.

In Northern Greece the Stone Age continued, as we have seen, much later than in the South. In strong contradistinction to the northern lands, in the Cyclades we find metal already used by the oldest known culture, which was chalcolithic. But the chalcolithic culture of the Cyclades was primitive enough, differing probably but little at first from that of the purely Neolithic period elsewhere. We know it chiefly from the excavations of the cist tombs at Amorgos, Melos, Paros, Syra

(Chalandriane), and other islands, and of the lowest settlement at Phylakopi in Melos. These tombs and the method of burial in them will be described in Chapter VI. Though obsidian is still used for knives and arrowheads, copper has now replaced stone for the larger weapons. The metal blade which could be used as spearhead or dagger appears—short, broad-bladed, and

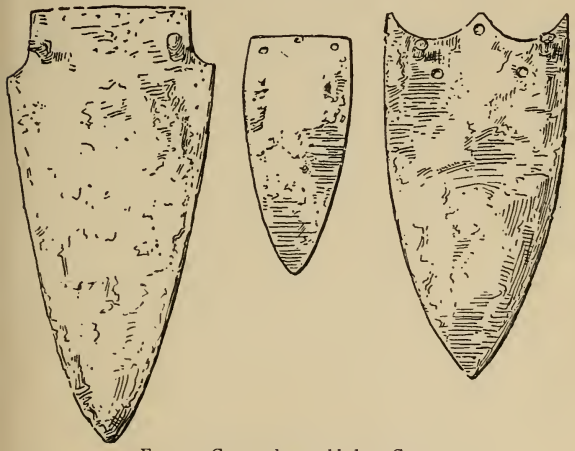


FIG. 2.—Copper dagger blades; Crete.
From Mochlos. Scale $\frac{2}{3}$.

with two or three holes at the wide end for the attachment of the haft. In Cyprus a peculiar form appears with a long tang twisted up at the end. This also one could say might be quite as much a spear as a dagger. Here the blade often takes a graceful leaf-shaped form. In Crete the first metal dagger, which has no tang, sometimes is crescent-shaped at the hafted end (Fig. 2); more ordinarily, in the corresponding "Early Minoan" period, it resembles that of the Cyclades. Metal

celts like those of Central and Northern Europe are rare.

Metal vessels are as yet unknown, but the stone vases, both of the Cyclades and of Crete (the "Early Cycladic" and "Early Minoan" periods) are very characteristic. In the Cycladic tombs we find both pots and lidded boxes (*pyxides*) of the fine marble of Paros. A beautiful round *pyxis* with white ribbed sides is in the British Museum, together with a small standing cup or calyx, both of this brilliant stone (Pl. XIII, 3, 4). Two more elaborate boxes, of Siphnian stone, are well known from their illustrations in Tsountas-Manatt's *Mycenaean Age*,[1] and other works. One of them is fashioned in the form of a dwelling or granary; it contains several cylindrical compartments, and has a regular door. Prof. Tsountas thought that it represented a pile-dwelling, but the supports which he took to represent piles are in all probability merely feet made to represent steps. The other, which also he considered to represent a dwelling, is probably not intended in this sense at all; its coiled spiral decoration and sides and conical lid look as if they were intended to reproduce basket-work. The same design is also seen on the other vessel.

In Crete the local steatite (a kind of soapstone) was in the first post-Neolithic Age much used in the manufacture of stone vessels, usually of simpler form than those of the Cyclades. They are usually small bowls, with suspension handles or simple lugs at the sides. Many of the stone vases show a most remarkable resemblance to the stone pots of early Egypt, where also at this beginning of the Bronze Age, the use of metal enabled men to utilize beautiful and many-coloured stones for the fabrication of vessels. It is probable that this art arose first in Egypt, where we find it at the end of the pre-Dynastic period, and was thence communi-

[1] *The Mycenaean Age*, Figs. 133, 134.

cated to Crete; we thus account for the undoubted resemblance of many of the Cretan forms to those of Egypt. The Minoan seafarers (for the people who lived at Pseira and Mochlos were certainly seafarers) could easily reach Egypt, and communication between the two lands may always have persisted since Neolithic days, else how did the obsidian of Melos reach pre-Dynastic Egypt, as it did? Later in the early Bronze Age the Cretan art of stone-vase making developed in a remarkable manner. This we know from the discoveries of Mr. R. B. Seager at Mochlos (p. 37), where were found, in graves of the Third Early Minoan period, innumerable small vases of multicoloured stone, steatite, marble, and breccia, wrought with the utmost skill, and using the actual veins of the stone to form a coherent pattern (Fig. 3). These beautiful stone vases were characteristic of this period, and do not recur in later times. The "Early Minoan" seems to have been particularly fond of making vases of stone. They have been found (though not all have the remarkable beauty of those from Mochlos) in all sites of this period in Crete. Whereas the pottery of the time is much inferior to that of the Neolithic period which preceded it and that of the Middle Minoan period which followed it, the stone vases are splendid. It would seem as if the degeneration of the pottery that followed the introduction of metal turned the men of this time to prefer stone to clay for the making of their best drinking and unguent vessels. The new knowledge of metal now enabled them to cut stone efficiently.

The forms of these small vases are often imitated from those of the contemporary pottery *Schnabelkannen* and other vases (p. 73); while others, especially some of the small lidded pots or *pyxides*, remind us strongly of Egyptian originals. One small pot is so precisely like a common and very typical Egyptian form of

FIG. 3.—Stone vases and lid; Mochlos.
Candia Museum. Scale, 1, $\frac{2}{3}$; 2, $\frac{1}{3}$; 3, $\frac{1}{3}$; 4, $\frac{2}{3}$.

EARLY SCULPTURE

1. CYCLADES
Ashmolean Museum
(Scale: 1/2)

2, 3. CYCLADES
British Museum
(Scale: 1/2)

4—6. CRETE (KOUMÀSA)
Candia Museum
(Scale: 2/3)

the VIth Dynasty that we can hardly doubt that it is an actual importation from Egypt.[1]

In Crete we do not yet find stone used for the representation of the human form to any extent, the only stone figures which are notable being some figurines from Koumása in the Messará (Pl. XIV, 4) which, with their formless painted stumps of figures, and their hatchet-shaped faces, remind us strongly of certain pre-Dynastic figurines from Egypt. But in the Cyclades the art of sculpture had already attained a considerable development in the remarkable marble figures which are found in the cist-graves (Pl. XIV, 1–3, p. 160).

At Mochlos we find the first Aegean treasure of gold. It is probable that, in the minds of many, "Mycenaean" antiquities are chiefly connected with the treasures of gold that were found by Schliemann at Troy and at Mycenae. The Trojan "Treasure of Priam" does not properly concern this book, but we may note that it appears to belong to the Second City, and to be contemporary with the later period of the "Early Minoan" Age in Crete. To this time belong the tombs of Mochlos, which have yielded the fine stone vases described above. And in these tombs Mr. Seager found the oldest Cretan objects of gold, the funerary decorations of the dead. They consist of diadems and bandlets of thin beaten gold, decorated with dotted or "punctuated" lines, minute but beautifully worked chains, and other objects, specially notable being hairpins in the shape of little golden flowers on their stalks. They give a very high idea of the craft of the Cretan goldsmith at this early period (Fig. 4).[2]

[1] Seager, *Mochlos*, Pl. II, M3, p. 80. When we remember that not long after this the Aegean design of the spiral, which we have already seen on Cycladic stone vases, suddenly appears in Egypt, and that at this time the Egyptian blue glaze was already being imitated in Greece, we realize that there is nothing improbable in such an importation. (*J.E.A.*, i, pp. 115–117.)

[2] From Seager, *Mochlos*, Figs. *passim*.

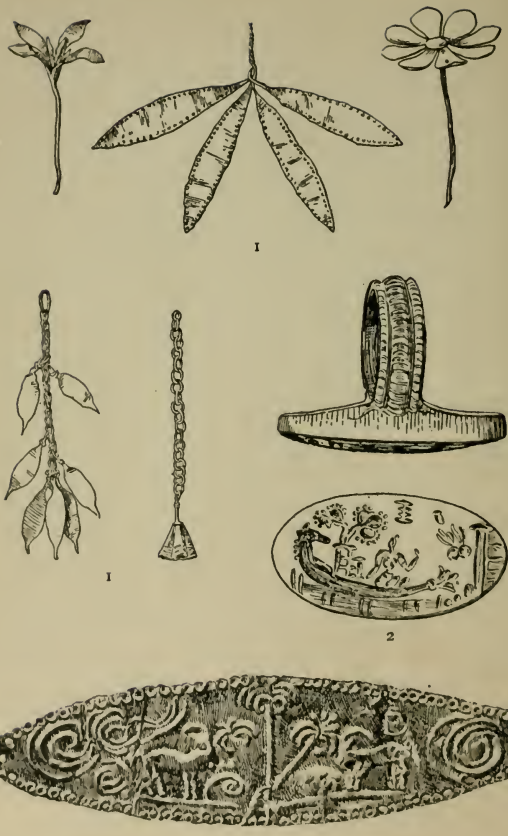


FIG. 4.—Gold-work. 1, Crete; Mochlos (E.M.III). *Scale c.* ½. 2, Crete; ring from Mochlos (L.M.I). *Scale* 2 : 1. 3, Cyprus; tiara or band from Enkòmi (L.M.III). *Scale* ⅔.

In the Middle Bronze Age metal was finely worked; this we know, though few remains of the toreutic of this age have survived; much, no doubt, was melted down to make the more modern products of the later age, of which we have fine examples. We know that the metallurgist and toreutic artist of the Middle period made things as fine as did those of the Later, though, no doubt, without the free and naturalistic touch that in this domain of art, as in that of ceramic decoration, characterizes the work of "L.M.I." We know it on account of the obvious imitations of metal-work in pottery that have come down to us. Fragments of pottery are indestructible, and bear their witness for ever; hence the supreme importance of ceramics to archaeological study. Shapes of metallic origin are common in the pottery from strata of this age; even the nails holding the metal of the model together are sometimes imitated in the pots. And one distinguishes at once forms natural to the potter and those natural to the metal-workers which the potter imitated. It would seem that the gold-workers of the Third Early Minoan period, whose products we have seen at Mochlos, had at the beginning of the next age turned to the making of vessels of precious metal, such as would have been found at Mochlos, had they been used in the preceding period, and such as were found at Troy, where the artists were nearer the gold of Pactolus than were those of Crete.[1] The men of Mochlos preferred to make vases of beautifully-veined stone. These stone vases disappeared in the succeeding age in favour of vessels of metal; of copper commonly, no doubt, but also, no doubt, of gold and silver. And these were imitated by the potters. One of the most interesting finds at Gourniá was a silver cup, 8 cm. high, of very graceful shape, with fluted rim, and handles secured by

[1] The scantier gold of Crete no doubt came also from the Lydian river-beds.

rivets of silver and bronze (Fig. 5, 1). It is of the Second Middle Minoan period, and was found in a house-tomb (see p. 161). Now in the same tomb were found two pottery vases of practically the same type (Figs. 5, 2, 3), obviously imitated from that of the silver vase and its congeners. Pellets of clay imitating rivets are placed where the handles join the rim, and painted imitations of rivets are placed midway between the handles. The vases are painted, it will be seen, and herein they no longer imitate metal. Their painting, too, is many-coloured. The pink clay is painted all black, and on this are bands, wreaths, and sprays of red and white.[1] One has regular plant-sprays on its fluted sides which foreshadow the naturalistic decoration of the succeeding period. This polychrome decoration is of the finest type of that characteristic of the Second Middle Minoan period, and is developed from a much simpler polychrome scheme, characteristic of the First period. Whence did the idea of polychromy come? The potters of the Middle Minoan period did not only imitate metal vases; they at the same time imitated

FIG. 5.—Crete; Gournia. 1, silver cup. 2 and 3, polychrome ware cups of similar shape. *Candia Museum. Scale c.* ½.

[1] BOYD HAWES, *Gournia*, Pl. C, p. 60.

the older pots of veined stone. This they did not so much in their shape but in their colour. The variegated hues of the stone vases were imitated, and polychromy first appeared in the Aegean ceramic. This is the predominant characteristic of the Middle Minoan potter's art. In M.M.I we see it first appear. At first the shapes of vases and their decoration are much like those of the preceding period. But soon we see that the designs, always in the "light-on-dark" technique, are more orderly, less haphazard, and less childish; and then the use of an accessory colour—red, crimson, or orange—to enhance the white design, first appears. The imitation of variegated stone is evident.

To the first period of the succeeding "Late Minoan" Age belong our finest examples of Cretan toreutic art. But these were not found in Crete. At the end of the Middle Minoan period the Cretan culture, which had become the finest flower of the prehistoric civilization of Greece, completely eclipsing the culture of the Cyclades, spread across the Aegean to the mainland of Greece. There we now see at Mycenae and Old Pylos, ancient centres of Greek heroic tradition, dynasts, probably of Cretan origin, established in royal state and power, and importing for their use the most treasured *objets d'art* and the most beautiful vases of everyday use that the artists of their Cretan home could produce. The splendid golden vases of Mycenae (the famous δέπας ἀμφικύπελλον with doves on its handles[1] (Fig. 6), to quote only one example), are products of Cretan art, whether they were made at Mycenae or not; the probability is that they were all imported. The Vaphio Cups are grand examples of the Cretan toreutic of L.M.I, and their occurrence in a Laconian grave shows that in the Peloponnese also Cretan art was prized.

The Vaphio Cups remain the most splendid specimens

[1] Schuchhardt, *Schliemann*, Fig. 240.

known of the work of the Minoan goldsmith (Pl. XV, 1). They have often been described, and their embossed designs are well-known, on the one the figure of the tall long-haired Cretan with rope in hand quietly hobbling a bull to an olive, while three others stand quietly by; on the other a bull, infuriated, rolling impotently in the stout net which has caught him in its

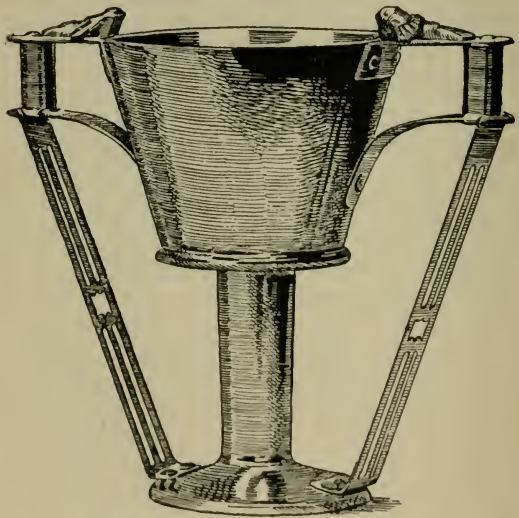


FIG. 6.—Mycenae; two-handled cup (δέπας ἀμφικύπελλον). *Athens Museum. Scale* ⅓.

meshes, while another impales with his horn a man with hair falling to the ground beneath him as he is tossed into the air, and a third careers wildly away past some palm-trees. The contrast between the peace and quietness on the one vase and the wild rage and fury depicted on the other is striking, and is a testimony to the crafts-

man's eye for antithesis and effect. The rough ground of Crete, with its rocks and plants, is carefully shewn, and above are the ragged clouds of a Cretan sky. The Egyptians, living under a heaven perennially serene, never depicted clouds.

Great *rhytons*, with their ends in the form of animal heads (an idea probably of Syrian origin), were made; the well-known silver bull's head with the golden rosette on its forehead, found at Mycenae, is one.

Then we may mention the fragment of a silver vase from Mycenae (Pl. XXXI, 1), with its embossed design showing the defence of a city by shielded soldiers in serried ranks, wearing feather-caps, while before them kneeling bowmen and standing slingers form a skirmishing line, reminding us of the fame of the Cretan bowmen and slingers in later times. And soldered on to the silver is a small shield of the peculiar Minoan figure-of-eight shape (p. 244), made of gold; doubtless a row of similar shields originally ornamented the vase. This brings us to the marvellous inlaying of the "Mycenaean" dagger-blades of bronze, with their scenes of hunting depicted on the flat in gold and silver, the lions flying from the shield-bearing hunters, the cat chasing wild-fowl.[1] These craftsmen could not only carve, they could paint in metal! Then there are the pommels of these daggers, with their masterly designs of lions in low relief; and the engraved golden diadems from Mycenae also. Worthy of special notice, too, is the dragon sceptre-head of Mycenae, with its scales of rock-crystal *cloisonné*.[2] All these objects date from the First Late Minoan period. In Crete itself, the bronze basins and ewer from Knossos, with their beaded and foliated rims, give a good idea of splendid vessels of gold and silver with the same finely conceived ornament which

[1] Perrot-Chipiez, *Hist. de l'Art*, VI, *La Grèce Primitive*, Pll. XVII–XIX.

[2] Schuchhardt, *Schliemann*, Fig. 250.

have perished (Fig. 29, 1). These are of the Second period. The silver vase from Gourniá (p. 54) is the oldest example of the work of the great period. From it we may conclude that in the Middle Minoan Age work was done as fine as, and probably even better in design than, that of the later age. But much of it was probably melted down and refashioned in the later period.

The metal vases of Crete were greatly prized in Egypt at this time, as the polychrome pottery of the preceding age had been, several centuries before, in the time of the XIIth Dynasty. We know this from the representations in the Theban tombs of Cretan ambassadors bearing gifts to the court of Hatshepset and Thothmes III (*c.* 1500–1450 B.C.). The ambassadors, who in one tomb are called "Princes of Keftiu and of the Isles in the midst of the Sea," wear the ordinary Minoan dress, exactly as we see it in all the Cretan representations, the peculiar male coiffure, with its long locks hanging behind below the waist and its elaborate curls on the crown of the head, being carefully portrayed.[1] The vases of gold, silver, and bronze which

[1] Mr. G. A. WAINWRIGHT (*Liverpool Annals of Art and Archaeology*, VI (1913), pp. 24*ff.*) distinguishes between the people of Rekhmara's tomb and those of Senmut's, calling the former "Keftiuans" and the latter "People of the Isles," the latter only being Minoans, while at any rate some of Rekhmara's foreigners, being Keftiuans, are not Minoans and Cretans, but Cilicians. He sees a distinction between the dress of "Keftiuans" (Cilicians) and "People of the Isles" (Minoans) which I am unable to perceive. There may be some difference in the kilt, but no doubt there were local differences in Minoan costume; and the most important fact of all, the characteristic Minoan coiffure, absolutely different from anything Syrian or Semitic, is common to both Rekhmara's and Senmut's foreigners, who are obviously of the same race. I cannot dissociate them or divide Rekhmara's men into two parties, of Cilicians and Cretans, as Mr. Wainwright would have me do simply because he thinks the evidence of other tomb-paintings points to the *locus* of Keftiu as Cilicia rather than Greece. I think that all Rekhmara's men were Cretans like Senmut's men, but I do not deny the possibility that the term "Keftiu" may have been used by the

2

3

GOLD *REPOUSSÉ* AND ITS STEATITE IMITATION

1. THE VAPHIO CUPS ×
Athens Museum
(Scale : 1/4th)
(From reproductions)

2. THE CHIEFTAIN VASE ×
Candia Museum
(Scale : 1/3rd)
(From a Cast)

3. FRAGMENT OF A STEATITE VASE
Ashmolean Museum
(Scale : 1/2)

they bear as gifts are typically Minoan in form, and typically "Late Minoan" at that. They are chiefly fillers of the peculiar shape already described, unknown till L.M.I, and cups of the Vaphio shape, also L.M.I. Other vases shown belong to the same period, a *prochous* with spiral decoration of M.M.III–L.M.I shape, and a jug of gold and silver, of which the exact counterpart, of L.M.III date, has been found at Knossos. A copper vase is of a *pithos* shape, which one would assign to L.M.I. Some of these vases are shown in the Egyptian pictures of one tomb, that of Senmut, as very large, but there is no doubt that this is an exaggeration in order to show their design of spirals and of bulls' heads alternating with rosettes. The carefully depicted handles of "Vaphio" shape clearly indicate this; it is improbable that the Minoans ever made enormous cups that could only be handled by giants.[1]

The fine work of the Minoan goldsmiths survived till the latest period of the Bronze Age, if we are to accept the Aeginetan treasure in the British Museum, published by Sir Arthur Evans many years ago in the *Journal of Hellenic Studies* (Vol. XIII, pp. 195–226), as belonging to so late a period as the tenth century. One wonders now whether this late date can be sustained, in virtue of the great resemblance which these cups and articles of personal decoration show to the work of the great period. One is inclined to assign them rather to

Egyptians to cover part of the south coast of Asia Minor, or even Cyprus. We have, however, as yet no proof that the Minoan costume of Rekhmara's and Senmut's tombs (which is exclusively Cretan, and did not extend to the mainland, as the Tirynthian frescoes shew) was ever worn by people in Southern Asia Minor, much less by Cilicians. See the *Journal of Egyptian Archaeology*, i (1914), p. 201.

[1] The Senmut fresco was last published by me, with a reproduction of a drawing made of it by Hay in 1837, in the *Annual of the Brit. School at Athens*, XVI, p. 254 *ff.*, Pl. I, XIV (=*J.E.A.*, i, Pl. XXXIII, Fig. 1).

the beginning than the end of the later Mycenaean period. Nevertheless, the golden jewellery found at Enkòmi in Cyprus, though much of it must be as old as the fourteenth century, shews many points of resemblance to the archaic Greek goldsmith's work found at Ephesus by Mr. Hogarth, which cannot be older than the eighth or seventh century. Evidently the skill of the goldsmiths of Mochlos was never lost so far as small jewellery was concerned and its tradition inspired those of Ephesus to no small extent. The tradition of Minoan art survived in Ionia throughout the period of storm and stress that ushered in the Iron Age, and in many ways, as in that of the goldsmith's art, supplied the foundation upon which later Greek art arose.

The Enkòmi treasure, also in the British Museum,[1] suffers very little in comparison with that of Mycenae. There are no splendid vases, but there is more jewellery. The same tiaras (Fig. 4, 3), rings, and bracelets of beaten gold were found at Enkòmi as at Mycenae, and we have more specimens of cunningly-wrought hairpin-heads, scarab-mounts, beads, and so forth, than at Mycenae. One of the actual nuggets that the goldsmiths used was found. Also Enkòmi is notable for the fine examples of imported Egyptian jewellery that were found, in the shape of necklaces of golden lilies with blue paste inlay, that are probably of XVIIIth Dynasty date.

The golden vases in *repoussé* work were often imitated in soft stone. A great bull's head rhyton in black steatite was found at Knossos, and the excavations at Hagia Triada have yielded the three splendid vases of black steatite, the vases of the Boxers, the Harvesters, and the Chieftain, which with their splendid relief shew us what was the splendour of the toreutic art which they imitated, actual specimens of which are the Vaphio Cups. For there is no doubt that these were imitations of golden vases, and were originally gilt.

[1] Murray, Smith, and Walters, *Excavations in Cyprus.*

The first of these, the Vase of the Boxers (Pl. XVI), is a tall "filler," eighteen inches in height, with a boldly rounded rim, decorated with vertical incised lines. The handle springs outward from the top of the rim, and rejoins the vase three inches lower down, curving outwards below for about an inch. It is fluted, and was fastened below by three studs, probably of metal. The body of the vase is decorated with scenes of boxing and bull-leaping, in four panels or registers. In the uppermost, which is much damaged, two boxers or wrestlers are struggling just beneath the point of junction of the handle. They wear nothing but a waistcloth, and high boots or puttee-like bands round the legs; their dishevelled hair hangs to their waists. Beyond them is a round pillar with oblong capital decorated with roundels arranged round a central oblong space. On the other side of this are three men, the two nearest following one another closely with both arms raised, while the third bends down to the ground, half-kneeling, probably in a struggle with another figure that has disappeared. They are dressed like the others, but wear helmets with long crests. In the second panel is a scene of ταυροκαθάψια or "bull-leaping," a sport much beloved of the Minoans, and often represented in prehistoric Greek art. Two great bulls gallop along with heads upraised and tails flying. The second is tossing a man, as on one of the Vaphio Cups. The rest of the scene is destroyed. The third panel is almost complete. Between two pillars of the same type as that on the first panel a victorious boxer stands above a defeated rival, who is falling prone with head to the ground by the side of one of the pillars; by the other another defeated man strives to raise himself from the ground. All three figures wear boxing-gloves and crestless helmets, round-topped and with cheek-pieces, of very Roman shape, from beneath which their hair escapes. Another similar group, of which only the victor and the

legs of the vanquished are preserved, stands between this and a third column. There were evidently three groups of boxers on the panel; the conqueror or the second beaten man has entirely disappeared. The lowest panel is complete, and shews two groups of victor and vanquished, who apparently illustrate the feat of swinging a rival up by the legs and dashing him in a heap on the ground, judging from the contorted portions of the vanquished with their legs in the air. These last combatants may be youths; they wear necklaces and no helmets; they are beardless, and their hair is carefully represented with the thick short curls in front and long masses behind which were characteristic of the Keftian coiffure (see p. 58). A third fighter of the same type is boxing in the air, as he has no opponent.

All the figures are extraordinarily energetic, though their poses are stiff and ungainly. The bulls are not equal to those of the Vaphio Cups.

The "Harvesters Vase" (Pl. XVII) is handleless, and has a carefully modelled neck and lip. Probably it had no foot, but it was made in three pieces, fitted into one another. The lower third of it has gone. On the middle portion we see in high relief a procession of rowdy villagers, all probably more or less drunk with the heady wine of Crete, stamping along in procession to the tune of a sistrum, carried by one of their number, and of their own voices, for they are shouting loudly as they go. Over their shoulders they carry flails and other agricultural implements; their coryphaeus, an elderly bearded countryman, has a big stick. He is bareheaded and wears a heavy capote (p. 236). Evidently the procession is a "Harvest Home." The life of this small relief is extraordinary; not only does one see the peasants stamping along with legs high in air in a sort of *Parade marsch*, but one hears them shouting. This is, probably, the masterpiece of Minoan art, at

From a Cast Candia Museum

HAGIA TRIADA
THE HARVESTERS VASE
(Scale: nearly full-size)

any rate in relief sculpture. The relief is most skilfully managed ; one sees sometimes three, even four heads, one behind the other. Even the best Egyptian reliefs are far surpassed by this in technique.[1]

The " Chieftain Vase " (Pl. XV, 3) is a small cup, some four inches high, of simple shape. On it is depicted in relief a scene of a prince receiving or dismissing a warrior and his train. The prince stands erect with his back against a wall of masonry. He holds out a long staff or sceptre with his right hand ; his left hangs at his side. He wears nothing but the waist-clout and an elaborate necklace ; his long hair, drawn back from his face, is secured by a band over the head and by two others behind (p. 239) ; it hangs over the left shoulder below his waist. He wears high boots. Opposite to him stands the officer, similarly attired, but with a simpler necklace and with his hair coiled up in a knot on the top of his head. He stands at attention, carrying two weapons, a sword and a long *falx*-like halberd, stiffly, one against each shoulder. Behind him are three of his men, unhelmeted and with hair hanging loose, each carrying an enormous shield of hide.

This little work of art, if it has not the force of the Harvesters Vase, surpasses it in charm. The two little figures are both graceful and dignified. The whole composition has much of the look of a Greek vase-painting. Its spirit is, indeed, quite Greek.

Rather akin to it, though not so good, is the fragment of a vase relief from Knossos, shewing two pig-tailed youths solemnly and pompously bearing sacred offerings towards a temple, the ascent to which is perhaps indicated behind them (Fig. 7).

Two other fragments of similar steatite vases or boxes (*pyxides*) are known with representations of

[1] It must, however, be remembered that the Minoans could only achieve results of this excellence on the small scale: they never tried to make large wall-reliefs like those of Egypt (see *J.E.A.* i, p. 203).

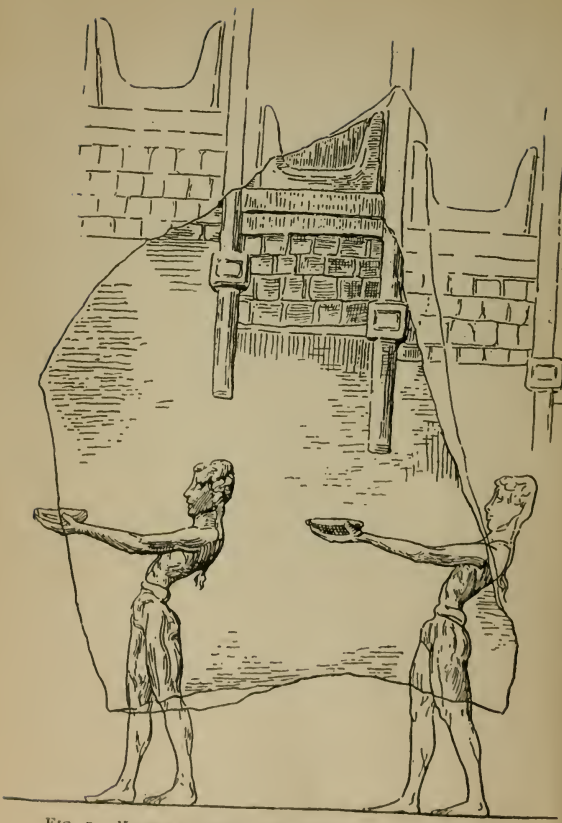


FIG. 7.—Knossos; fragment of a steatite vase with procession of youths. *Candia Museum. Enlarged.*

Metropolitan Museum, New York

Cyprus Museum

CYPRUS

RIMS AND HANDLES OF BRONZE VASES

(Scale : 1/6th)

boxers. One has the stone wall of a building represented behind him, on which grows an olive (Pl. XV, 2): close by is a horned altar. All these were evidently imitations in gilt steatite of the gold *repoussé* work of which we have actual examples in the Vaphio Cups.

Other stone vases of this period do not pretend to be other than they are. And they are often very beautiful examples of stone carving. Variegated marble was used, and the vases were usually of the pointed shape resembling that of the pottery "filler" (p. 94, Figs. 8, 26, 28). The shoulder and neck of the vase are often decorated with a raised band or collar, carved in relief (Figs. 8, 26). Sometimes, as in the case of the Harvesters Vase from Hagia Triada, neck and body are separate, being cut in two different pieces of stone, and fitted into each other. This was often done in Egypt also, where the two pieces were usually cemented together, as was no doubt the case with the Harvesters Vase, which was originally made in three pieces, the lowest of which is lost. Another material which was used for stone-vase making, though no doubt rarely, was obsidian. At Tylissos a magnificent little pointed vase of obsidian was found, a few inches high, which is one of the greatest treasures of the Candia Museum (Fig. 8). Another stone, a red porphyry, was often used for the manufacture of the great standard

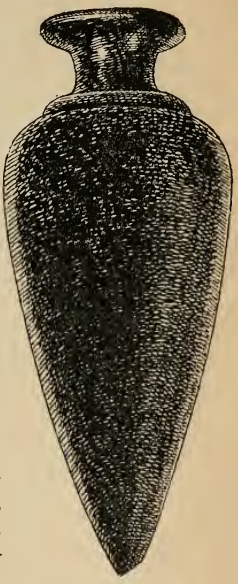


FIG. 8.—Crete, Tylissos; obsidian vase. *Candia Museum. Scale* $\frac{3}{8}$.

lamps, with their foliated lips and edges, which are characteristic of the Late Minoan period (Fig. 9). Smaller

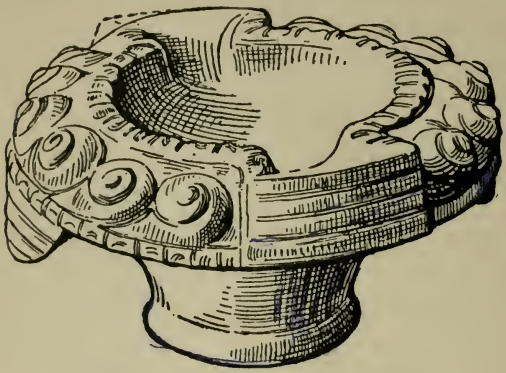


FIG. 9.—Lamp of purple gypsum. *Scale* ½.

vessels were commonly made of grey steatite; especially noticeable are the beautiful and also extremely characteristic steatite pots in the form of flowers,

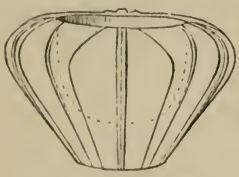


FIG. 10.—Flower vase.

FIG. 11.—Flower vase; later type. *British Museum.* *Scale* ½.

which are seen in most collections of Minoan antiquities (Figs. 10, 11).

The *repoussé* decoration of the rims and handles of two bronze vases from Cyprus is shown in Pl. XVIII.

Of the more ordinary metal vessels, of bronze, considerable numbers have been found in the tombs of Knossos in Crete and Enkómi in Cyprus. Great handled ewers, kettles, cooking pots (sometimes tripodal, see Fig. 39, 3), and other vessels made of bronze plates riveted together were used, and huge basons or cauldrons, the largest of which, measuring several feet across, are among the finest objects recovered by Dr. Hatzidakis at Tylissos (Fig. 12).[1] The copper was brought to the smith in large flat pigs with four lugs to carry them by. Very fine ones were found at Hagia Triada, and one from Enkòmi is in the British Museum. This has an incised mark, no doubt denoting the mine or furnace from which it came (Fig. 13).

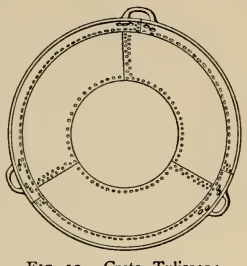


Fig. 12.—Crete, Tylissos; bronze cauldron. *Candia Museum. Scale c.* $\frac{1}{30}$.

The metal-workers cast in bronze small figures which had been modelled in clay in the round, by the *cire perdue* process. The result is, as we see it in such figures as the praying woman at Berlin (Pl. XIX), or the praying man from Tylissos (Fig. 14),[2] evidently very true to the original model, the metal remaining rather rough and untrimmed, and giving a somewhat Rodinesque impression, which is not unpleasing to the modern eye, and is a welcome relief after the well-polished elegance of Egyptian bronze figures. We have, too, some admirable little figures of animals, *couchant* oxen and so

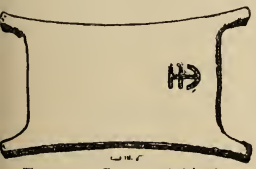


Fig. 13.—Cyprus, Enkòmi; pig of copper. *British Museum. Scale* $\frac{1}{15}$.

[1] Ἐφ. Ἀρχ., 1912, p. 221.

[2] *Ibid.*, Pl. XVII.

forth, which, being sometimes filled with lead, were no doubt weights (Fig. 15, Brit. Mus., from Cyprus, see p. 232).

As will be seen later, the Minoan sculptor never essayed large models in the round, and the metallurgist never attempted statues of metal such as those wonderful giant figures, made of worked and beaten bronze, of

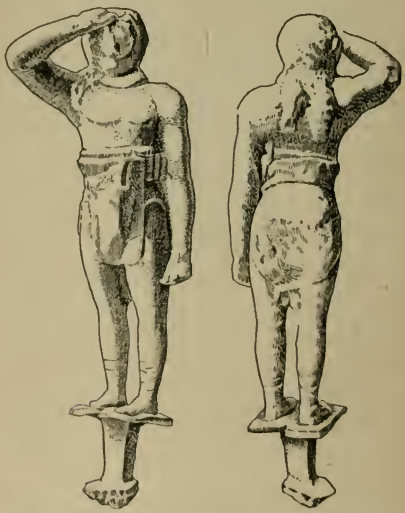


FIG. 14.—Crete, Tylissos; bronze figure of man praying: votive. *Candia Museum. Scale* ⅓.

"King Pepi and his Son," in the Cairo Museum, which show what the Egyptian metal-worker could do in the time of the VIth Dynasty, contemporary with the Third Early Minoan period. But, on the other hand, the Egyptian could not make Vaphio Cups.

The triumphs of the Minoan weaponsmith at Mycenae have already been mentioned; a more

(From a Cast)

Berlin Museum

PRAYING WOMAN: BRONZE

(Scale: 3 4ths)

Cire perdue

detailed description of the various types of bronze weapons in use will be found in Chapter IX.

Equally notable are the triumphs of the goldsmith in smaller works of art, such as the gold plaques (p. 240) and finger-rings (p. 207) from Mycenae, of which there is a series of electrotype reproductions in the British Museum. One of the rings is illustrated Pl. XXXII, Fig. 1. A ring of the same type and of the same period (L.M.I) from Mochlos is illustrated Fig. 4, 2; it has unhappily been stolen from the Candia Museum. The rings and other small goldsmith's work from Enkòmi have been mentioned on p. 60.

Iron came to Greece, apparently from the North, and with the invading Aryan tribes who gave the Greek language to the Aegean lands, at some time after the thirteenth or twelfth century B.C. Our tale is confined to the Stone and Bronze Ages; the story of the supersession of bronze by iron for weapons and tools will be found briefly sketched in my *Ancient History of the Near East*. For the making of vases and jewellery the troubled period of invasion and conquest had little use, but the tradition of the toreutic and jeweller's art of the Mínoans never died; we find its triumphs remembered in the Homeric description of the "Shield of Achilles," and its tradition survived in the goldsmith's work of the Ionian artists at Ephesus in the seventh century.

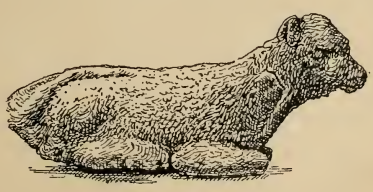


FIG. 15.—Bronze weight in form of a calf.
British Museum. Actual size.

CHAPTER IV.—POTTERY

THE pottery of prehistoric Greece takes a most important place in Levantine archaeology, as its careful study has contributed largely to build up the chronological scheme of the development of Aegean culture, though, as has been said, this scheme does not depend on pottery alone, but is checked and controlled by our other knowledge (see p. 3).

In Crete the Neolithic potter knew how to burnish his dark and coarse ware. Few perfect pots are known from Crete; the mass of fragments shows us only that simple forms were used, with holes in lugs at the side for handles. Often an incised zigzag ornament was added, later filled in with white—a form of decoration very characteristic of primitive pottery (Fig. 16).

Pottery was also used to make spindle-whorls, and rude figures of human beings, mostly steatopygous women.

The primitive pottery of the Cyclades we may call "Early Cycladic I." Its first development was the supplanting of the burnished ware by a kind in which the burnishing was imitated by a wash of lustrous dark-coloured paint, in which patterns were incised and often filled in with white paint. The shapes are primitive; some are modelled after the form of the shell of a sea-urchin, which looks as if the primitive islanders made use of this object as a cup before they began to make pottery, and afterwards imitated it in clay. Very characteristic are certain vases with globular bodies, feet, and wide mouths, which were imitated in stone (Pl. XIII, 1), the white marble of Paros being used, as we have seen above (p. 48). A very interesting

pottery vase in the British Museum (Pl. XIII, 5) of this period has on it an incised imitation of the well-known Egyptian lily-petal decoration, which must therefore have been known in Greece as early as the period of the Old Kingdom, between 3000 and 2500 B.C.,[1] which must be, roughly, the date of the Early Cycladic graves. Characteristic of this ware at a slightly later stage of development are certain vases with globular bodies and beaked mouths, which the excavators at Phylakopi called *πάπιαις* or "ducks," on account of their appearance (Pl. XX, 1).[2] These duck-vases influenced the form of the well-known long-beaked pots, the *Schnabelkannen* of the Cyclades and Crete, to which we shall soon refer. We do not know whether the invention of glaze-paint, imitating the burnished Neolithic vase, was a Cycladic or a Cretan discovery. The Melians often used dark matt-paint on a light ground, which the Cretans did not adopt; this looks as if the lustrous paint, to which the Cretan potter continued faithful, was a Cretan invention. Cycladic art now followed its own line of development, differing from that of Crete, to which we now pass. We shall return to the Cyclades later.

FIG. 16.—Crete. 1, Neolithic ware; Knossos. 2, E.M. II, transitional ware. *British Museum*. *Scale* ½.

The stage of culture in Crete which immediately followed the latest Neolithic age is recognizable,

[1] HALL, *Journal of Egyptian Archaeology*, I, p. 113, Pl. XVII, 2. It may be noted that the petal decoration occurs in Egypt as early as the 1st Dynasty. See PETRIE, *Royal Tombs*, I, Pl. XXXVIII, 1, 2.

[2] *Phylakopi*, p. 88.

though not very many remains have been found of it. We may call it "sub-Neolithic," or, in accordance with the scheme of Sir Arthur Evans, described on p. 3 *f.*, designate it as the first stage of the Early Minoan period, "E.M.I." We have no remains of it but pottery which resembles that of the Neolithic period, though it is not by any means so good. We cannot on this account argue that the sub-Neolithic Cretan culture was inferior to the contemporary Chalcolithic culture of the Cyclades, though the islanders had with their marble figures and their carved *pyxides* made a stride forward in art which apparently the Cretans could not or did not emulate, while their pottery in the later Chalcolithic period was considerably more developed than that of the earlier. We rather regard the sudden falling-off of the Cretan pottery from the Neolithic standard as an effect of the introduction of metal, which was probably from the first commoner and more generally used in Crete than in the islands. As I have pointed out already,[1] this degeneration of pottery at the time of the introduction of metal is noticeable elsewhere; at Troy, for instance, and in archaic Egypt, where the ceramic of the first three dynasties shews a woeful contrast to the splendid pottery of the "pre-Dynastic" or Neolithic age. Probably the skilled men who had made the Neolithic pottery now turned their brains towards the devising of stone vessels, easily fabricated with the aid of metal, and left the potter's art to inferior workers. In Crete, however, the ceramic art soon recovered, and quickly developed on new lines. During the long Neolithic period the pottery had developed very slowly, and never altered its tradition of incised ornament on a burnished ground. Only the addition of white to the incision was tolerated. The advent of metal, however, revolutionized men's minds. We have seen the remarkable development of

[1] *Proc. Bibl. Arch.*, XXXI (1909), p. 137.

EARLY CYCLADIC AND MINOAN POTTERY

MELOS

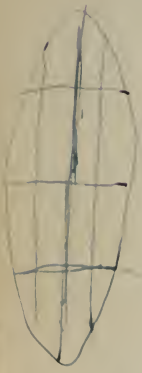
1. Duck-Vase
2. Prochous
3. Kernos
4. "Flower" Vase-stand
5. "Flower" Bowl
6. Cup

CRETE

7. "Vasiliki Ware" Schnabelkanne
8. "Vasiliki Ware" Bridge-spout Vase, Palaikastro
9. Incised Schnabelkanne (E.M. III)

(Scale: 1—3, 1/5th; 4, 5, 1/6th; 6, 1/4th; 7—9, 1/5th)

Nos. 1—3, 6—9, British Museum. Nos. 4, 5, Ashmolean Museum



art that followed it in the Cyclades; in Crete the potter suddenly took to new ideas. While inferior incised pottery continued to be made (Fig. 16, 2), the Second Early Minoan period is marked by the invention of the lustrous paint, already mentioned, to imitate the polished surface of the old burnished ware which men could no longer make. On this a geometric design was painted in white, imitating the old white-filled incised ornament. This new technique only became usual, however, in the succeeding age; at first there was evidently a difficulty in covering a large surface with the lustrous wash, and so the potter contented himself with simply reversing the idea, and painting his design with the lustre-paint on the light surface of the pottery. In the Cyclades, whither the Cretan invention of the lustre-paint had soon been communicated, this arrangement found favour (Pl. XX, 3–6), and persisted. But in Crete in the Third Early Minoan period it no longer appears, as the potter has succeeded in attaining what he wanted—a design in white on the dark lustrous surface. Pottery of this style is specially characteristic of E.M.III, but another style was also in vogue, which has been found only at Vasiliki near Gourniá, and at Palaikastro. In this style an effect was gained which to our eyes is much finer than any produced by the painted surface-decoration of the time (Pl. XX, 7, 8). The vase was fired in such a way that a mottled and clouded black and red surface was produced; this was then polished. The shapes of the vases of this period are often remarkable; the most characteristic are the *Schnabelkannen* with enormous beak-spouts (Pl. XX, 7, 9), which either originated in the Cyclades as a development of the "duck-vases" (p. 71), or were derived from an Egyptian form.[1] The inventions of

[1] See the illustrations, *J.E.A.*, I, Pl. XVII, 3, 4. If, however, the *Schnabelkannen* were derived from the πάπιαις, we have an idea communicated to Crete from the islands.

the potter's wheel and the kiln now reached Crete.[1] A characteristic of E.M.III pottery which is very important is the beginning of the use of the spiral as a surface decoration.[2] Neither the spiral nor any curved line had been used by the Neolithic potters, as such a line does not lend itself easily to the motion of the stone incising-tool on the surface of the vase. Zigzag lines were easy, and the rule. And the first imitators in paint of the Neolithic decoration had followed this rule. But it was soon found that with the brush a curved line was easier to make than an angular one.

We now return from Crete to the Cyclades. Our information as to the development of the "Cycladic" culture contemporaneously with the Cretan "Early Minoan" period is derived chiefly from the excavations at Phylakopi. Here the "First City" corresponds in time with E.M.II and III. The pottery developed independently of that of Crete, after the probably Cretan invention of the lustrous paint had been adopted.

Contemporaneously with the use of lustrous black (turning red when over-fired) designs on a white surface a whole surface of black or red, often burnished, on which white designs were painted, was also used (analogous to the typical Cretan ware of E.M.III). Another style, totally unknown in Crete, was also employed, consisting of designs painted in matt black upon the white clay. The peculiar Cretan "Vasiliki" technique was unknown. The painting in matt black, as we shall see, is found to be characteristic of the presumably native pottery of the Greek mainland in the early stage of the transplanting of the Cretan culture

[1] On the probable Egyptian origin of these two inventions, see *Anc. Hist. Near East*, p. 41.

[2] On the probable Aegean origin of this design in the Levant and its apparent communication from the Aegean area to Egypt, see *P.S.B.A.*, XXXI (1909), p. 221; *Anc. Hist. Near East*, p. 40; *J.E.A.*, I, p. 115.

to Greece proper in L.M.I. Much pottery of this kind was found in the shaft-graves at Mycenae. Whether this matt-painted ware on the mainland is really of native origin, and not simply a copy of Cycladic pottery, we do not yet know. It seems hazardous to suppose that its technique came to the Cyclades originally from the mainland, as the lustrous-paint technique probably came from Crete. It is more probable that it was invented in the Cyclades, and passed thence to the mainland. Originally it may simply have been an unsuccessful Cycladic attempt to imitate the Cretan lustre-paint in the " dark-on-light " scheme of decoration. The Melian clay was much more porous than that of Crete, and probably the lustre-paint did not " take " well on it.

This matt-painted pottery is specially characteristic of the later period of the First City at Phylakopi (E.C.III), when the older incised style had finally died out, as in Crete. The First City found its end at the close of this period in a catastrophe, a destruction or abandonment, and the Second City, of the Middle Cycladic period, was built on its ruins on street and house-lines that in no way corresponded to those of the earlier time. Yet this break in continuity of life at this particular place meant no general break in the continuity of the Melian civilization. This is clearly shewn by the pottery of the Middle Cycladic period, which developed from that of the Early period as certainly as did the Cretan pottery at the Middle from that of the Early Minoan period.

Passing on to Greece proper, the excavation of the *Aspis*, the low shield-shaped hill that lies at the base of the great Lárissa of Argos (Pl. XXVII, 1),[1] has shewn us a rude domestic pottery accompanied by the matt-painted ware already mentioned, and by a peculiar ware,

[1] Vollgraff, *Bulletin de Correspondance Hellénique*, XXVIII (1904), p. 364 *ff.*; (1906), p. 5 *ff.*; (1907), p. 139 *ff.*

certainly of non-Aegean origin, which we shall again meet with later, known as "Minyan." This ware, however, belongs to the later period; more definite remains of the Early Bronze Age have been discovered in the recent excavations at Tiryns, which have revealed large quantities of a ware which as definitely belongs to the mainland as does the "Minyan," but is much older. This is a hand-made and polished pottery, covered with a thin semi-lustrous wash varying in colour from red-brown to black. The idea of the lustre may have been derived ultimately from Crete, and it may be originally a mainland imitation of the Cretan and Melian imitation of the old burnished Neolithic pottery. This ware was first found at Orchomenos in Boeotia by Furtwaengler, who called it "*Urfirnis*"-ware, and as *Urfirnis* ("primeval glaze") it is usually known. This was probably the common mainland pottery of the early Bronze Age on the Greek mainland, succeeding the Neolithic wares and preceding the black or grey "Minyan" and the perhaps originally Cycladic "*Mattmalerei*" of the later period. The *Urfirnis* of Tiryns differs somewhat from that of Boeotia. At Orchomenos it must have found its frontier over against the territory of the polychrome Northern Neolithic or Chalcolithic styles. Other local varieties of pottery of small importance which may be assigned to this period have been found in Attica and elsewhere.

Of the non-Aegean Neolithic and Chalcolithic culture of Central and Northern Greece, with its polychrome and geometric pottery, which has recently been discovered, we have spoken, p. 40 *ff*. The oldest Thessalian pots are not polychrome, and sometimes are of a very fine red ware. Incised designs of simple character occur. Later on, painted designs in red colour on white came into vogue, and was soon followed by a remarkable decorative scheme of geometric patterns in bands of

chess-squares, zigzag lines, maeanders, and ragged shreds, so to speak, in black, or black, red, and white on the buff surface of the ware. Occasionally a spiral appears, which seems to give a hint of influence from the spiral decoration of the Aegean Bronze Age, with which the work of the British excavators have shewn it was contemporary. And we may wonder whether, if dates allow of it, the whole idea of polychromy was not communicated to the Northern Greeks from the polychrome art of the " Middle Minoan " period in Crete. But the Northerners took nothing but the occasional spiral from the decorative schemes of the South ; their geometric patterns were used by them to the last, just

FIG. 17.—M.M. cups; Palaikastro. *Scale* ⅓.

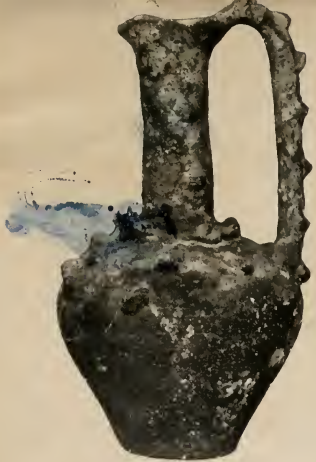
as they preserved the use of stone weapons and tools till a period almost contemporary with the closing phase of the Bronze Age in the Aegean.

The polychrome pottery of the Middle Minoan period in Crete, to which we have now come, has already been mentioned as a ceramic imitation of the vases of many-coloured stone which were made in the Third Early Minoan period, as we have seen at Mochlos. The coloured designs were naturally not confined to mere imitation of veined stone (Fig. 19, 1), but soon took over the spiral ornaments that had begun in the preceding age. Queer little rosettes, quirks, and dots also appear (Fig. 17) ; plant designs, cruciform and antler-like patterns too. The decoration is a vivid red and

white on the black background of the vase. This black ground is a "slip" of colour laid on the buff pottery. The ware itself gradually became finer and more skilfully made, till in the Second Middle Minoan period a veritable "eggshell" ware, of remarkable thinness and delicacy, was produced. That this is an imitation of thin metal is undoubted; to the potter a moderate thickness of the vase-wall is natural. And now for the first time an unified design covers the whole vase.

A further development appears in the shape of decoration in relief. Blobs or drops of colour appear (Fig. 19, 2); one finds a red rosette with a circle of *appliqué* white dots round it; then we see raised lumps and horns, which give the vase a most fantastic appearance (barbotine ware, Pl. XXI, 1); sometimes we find a bowl that resembles nothing so much as an elaborate cake of Viennese pastry. Plant-sprays in relief appear, and even a group of sheep with shepherd;[1] we almost expect lizards and snakes, as on Palissy ware. This remarkable pottery we know generally as "Kamárais" ware, from the place near which it was first found in bulk, as has been said on p. 35. In it we see the first appearance (if we leave out of account the extraordinary hornbill or toucan-like appearance of the earlier *Schnabelkannen*, Pl. XX, 7, 9) of that fantastic character which differentiates Minoan art so completely from any other of ancient days. Egyptian art was never fantastic, and only once and for a brief season, in the day of Akhenaten the heretic, was it at all *bizarre*. But its *bizarrerie* and fantasy are the chief peculiarity of the contemporary art of Greece, and give it much of its remarkable charm. After the Vth Dynasty one always knows what to expect in Egypt; in prehistoric Greece never, till the decadence. Equally fantastic in appearance are the great *pithoi* or store-jars, often as big as a man, which now first appear; they are covered with great

[1] On an unpublished vase from Palaikastro, in the Candia Museum.



Ashmolean Museum

British Museum

MINOAN POTTERY

1. Vase of Barbotine ware (M.M. II.) : Crete
(Scale : 1/2)

2. L.M.I. Vase from Egypt
(Scale : 1/2)

PLATE XVI

knobs in relief, which are strongly reminiscent of metal-work (Fig. 18). We find Middle Minoan *pithoi* both at Phaistos and Knossos, but chiefly at the former place. Most of the Knossian *pithoi* are of the later period, and their ornament is much toned down from the fantastic relief-decoration of their Middle Minoan ancestors.

In the ceramic art of the Third Middle Minoan period we seem to see the operation of a restrained and cultivated taste which had reduced the wild exuberance of the Second Middle Minoan period to greater orderliness of idea. The pottery becomes sober in form and decoration, and exhibits a style which to my mind is the most pleasing of all. Big vases are usual, of somewhat coarse ware, covered with a purplish wash, sometimes allowed to trickle down the sides of the vase in admired disorder (Fig. 19, 5). When the wash covers the whole vase, on it are painted in white either plain lines or simple naturalistic designs derived from plants. The rather blatant polychromy of the preceding period disappears, and the naturalistic tendency, which had already appeared then, now holds the field, and is soon to develop into the splendid, though not always pleasing, naturalism of L.M.I. One of the most beautiful pots of this period is one discovered at Knossos, which shews a simple row of long-stalked lilies painted in white on the purple-black ground of the vase (Fig. 19, 4); the design covers the whole field, and is perfectly proportioned to the size and shape of the pot. Beneath the rim and round the two side-handles are two simple white lines. To me this is in some ways the most beautiful of all

FIG. 18.—M.M. Pithos; Phaistos. *Scale* $\frac{1}{15}$.

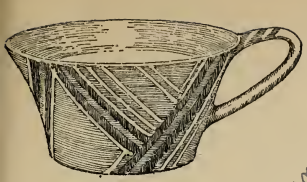
Minoan vases, and it seems to express by itself the whole feeling of this last period of Middle Minoan art. The next period carries on the naturalistic tradition, and develops it in exuberant wise, in this exuberance resembling the art of M.M.II, but in better taste and without the exaggerated *bizarrerie* of the latter. The designs of L.M.I are universally carried out in the dark-on-light technique in fine lustrous brownish-black glaze paint that henceforth was the regular system of Greek vase-painting. The final abandonment of the light-on-dark style marks the end of the Middle Minoan period. Only the occasional use of white as an accessory is the last survival in L.M.I of the Middle Minoan colour-scheme; and before the beginning of L.M.II this finally disappears.

Yet it is not always easy to say definitely whether a pot is M.M.III or L.M.I. There are many which mark a transition-stage between the two styles; we find a combination of the two techniques of "light-on-dark" and "dark-on-light" designs upon the same vase.[1] In other objects than pottery the difficulty is great, as the same naturalism and bold handling is characteristic of both periods. Yet the periods seem to be distinguished in the stratification of Knossos, where it is evident that M.M.III closed with a catastrophe, a great conflagration which partly destroyed the older palace. We cannot, therefore, establish the distinction between the two, and combine M.M.III and L.M.I into a single period, as is proposed by a recent writer.[2] And though it is not always easy to say whether a "transition" pot[3] is M.M.III or L.M.I, yet the majority of vases of the two periods are certainly distinguishable; a late L.M.I pot could not possibly

[1] *J.H.S.*, XXII (1902), Pl. XII, 2.

[2] Reisinger, *Kretische Vasenmalerei* (1912), p. 18.

[3] *E.g.* one found at Anibeh, in Nubia, by Mr. Woolley and published by him in *Journ. Philadelphia Mus.* i. (1910), p. 47, Fig. 31.



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G. 19.—Crete; 1, 2, M.M.II polychrome (Kamárais) ware: Mochlos. *Scale c.* ¼. 3, M.M.III faience cup: Knossos. *Scale* ½. 4, M.M.III lily vase: Knossos. *Scale c.* ½. 5, M.M.III "trickle"-ware vase: Gourniá. *Scale c.* ⅓. *Candia Museum.*

be ranked as belonging to the same period or style as one which is evidently early M.M.III.

At the end of the Middle Minoan period we see that the forms of the vases have become less grotesque and more beautiful. The weird *Schnabelkannen* have disappeared, only a *prochous* with a rather unnecessarily upturned spout representing them. But the "bridge-spout" vase (Pl. XX, 8), which first appears in the late Early Minoan period, and was probably then derived from an Egyptian copper or bronze original, is still retained, and goes on into the L.M.I period. It had nothing of the grotesqueness of the *Schnabelkannen*, and commended itself to the good taste of the later potters, who rightly retained it in their repertory. The metallic types of M.M.II are not now so common, and forms natural to the potter are more popular, such as a large vase with pinched-in mouth and two side-handles (Fig. 39, 6), soon to become the parent of the well-known *Bügelkanne* or "stirrup-vase" of the Late Minoan age (p. 94).

We do not possess so many vases of the Third Middle Minoan period as of the others, but we do possess more remains of other kinds of ceramic art than in the case of the preceding ages. Especially notable are the splendid examples of the real glazed pottery or "faience"—the lustrous or "varnish-paint" is not a glaze in the Egyptian sense—borrowed by the Minoans from Egypt,[1] which we have in the group of the "snake-goddesses" and their appurtenances which Sir Arthur Evans discovered at Knossos in 1903. These were found in a group of subterranean stone "repositories" of which the date is definitely shewn by the pottery to be M.M.III. The figures of the "snake-goddess" and her attendant with the *couchant* cat on her head (Pl. I) are among the most remarkable that archaeology has recovered from the debris of prehistoric Greece.[2] The

[1] See *J.E.A.*, I, p. 117.

[2] *B.S.A. Ann.*, IX, Figs. 54a, b to 57. The head of the second figure

two weird women stand there, figures of polychrome-faience a little over a foot high, attired in the latest Minoan female fashion of their day, and holding at arm's-length with strong and imperious gesture writhing and twisting serpents. A "spotted snake with double tongue" curls itself round the high head-dress of the chief figure, while on the head of the other, above what looks like a wreath, sits a spotted cat, with face looking straight out at the worshipper.[1] These things are of magic, and give us a hint of very queer religious beliefs (see p. 157). The association of the cat with the snake is specially noticeable, and as it is paralleled elsewhere, was evidently a definite item of Minoan superstition, as it has since been in other lands. Of the costume of the goddesses we shall speak later. With these figures were found many other objects of the same faience and evidently of sacred character. As works of art the two flat-relief groups of a goat and kids (shewn on the cover) and a cow with a calf are very remarkable apart from their material. They are typically Minoan in character, and could not be mistaken for products of any other art. Small flying-fish were also found, innumerable cockle-shells, and parts of plants, all in the same faience. In the case of the goddesses the ground-colour is white, the details being laid on in pale blue and in purple, purplish-brown, or black; the animals, shells, etc., are in the usual pale blue-green colour which came originally from early Egypt, with details in the same dark colours as the female figures.[2] Faience vases were also found, notably a bowl

(joined to it later) appears in the illustration, *Anc. Hist. N.E.*, Pl. IV, 3, with the cat; also *J.E.A.*, I, Pl. XXXIV, Fig. 1.

[1] With this figure is illustrated in *J.E.A.*, I, Pl. XXXIV, Fig. 2, a wooden statuette of a dancer holding bronze snakes and wearing a lioness mask, which was found by Petrie at the Ramesseum. It is of the XIIth Dynasty, and is therefore roughly contemporary with the Knossian figure.

[2] Evans, *B.S.A. Ann.*, IX, p. 62 *ff.*

imitating a metal form, and two very elegant little pale blue cups with well-proportioned fern-sprays in brown on their sides and each with a sprig of rose-leaves in relief, springing from the top of the handle, and trailed with apparent carelessness, but in reality with a well-judged eye for correct placing, over the inner margin of the cup (Fig. 19, 3). These two vases mark the apogee of the Middle Minoan relief-decoration.

We may compare with the figures of the snake-goddesses and animals in faience the much ruder clay figurines of an earlier period of the Middle Bronze Age (M.M.I), found at Petsofà near Palaikastro, at the eastern end of Crete, by Prof. J. L. Myres in the same year.[1] These are evidently votive offerings, and those representing men and women are as valuable as the Knossos figures for our knowledge of Minoan costume (see p. 236). The dress of the women is as extraordinary as that of the snake-goddesses, and both are apt to startle people with the usual ideas of "Greek" costume, or ancient costume generally (Figs. 96, 97).

It is at the end of the Middle and beginning of the Late Minoan period that we find Cretan culture expanding northward to the islands and the mainland.[2]

Left to themselves the Melians had not been able, owing to greater poverty and lack of opportunity, to keep up the impulse which had pushed their culture at first a little ahead of that of Crete. Their pottery of the later "Early Cycladic" period and the "Middle Cycladic," corresponding in time to E.M.III–M.M.II, was, though characteristic, undistinguished, and rather archaic in comparison with that of Crete. There is still an early character about it. Typical vases are big group-pots or *kernoi* (Pl. XX, 3), and bowls with red-painted interiors and dark stripe-designs on the buff exterior, (*ibid.*, 5). Also there were "stands" with tops

[1] *B.S.A. Ann.*, IX, p. 360 *ff.*

[2] *Anc. Hist. Near East*, p. 56 *ff.*

painted in imitation of a rosette of flowers (*ibid.*, 4). Some of the earlier pots have queer imp-like creatures painted on them, and the human figure also appears.[1] Among pottery of the Aegean family, it is characteristic of the Cycladic, as of the Cyprian L.M.III in later times,

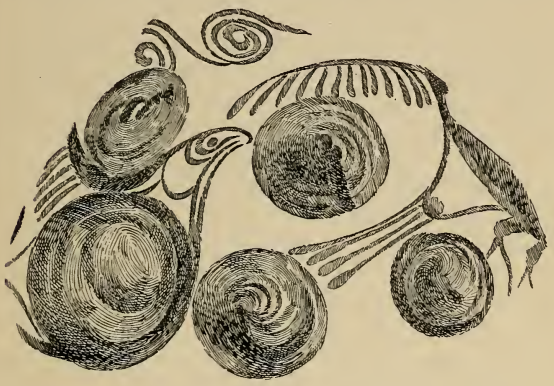

FIG. 20.—Melos; bird design on M.C.III vase from Phylakopi. *Scale* ½. *British Museum.*

that the human figure is represented on it, whereas not a single instance of it is known on a true Cretan pot of any period. Possibly the impression of a human being which would be possible on a vase painted in the Cycladic way was too crude for Cretan taste, and so was avoided. And the Cretan was right if he avoided such atrocities as the dreadful procession of goggle-eyed fishermen, each holding a dolphin by the tail, which is seen on the "Fisherman Vase" from Phylakopi.[2] With this masterpiece of Melian art before us, and the terrible splodgy birds in bad purple paint on a light ground (Fig. 20) which ornament the queer wineskin-like

[1] *Phylakopi*, Pl. XIV 6c, 9; XIII, 14, 17. [2] *Ibid.*, Pl. XXII.

Melian vases of M.C.III,[1] it is no wonder that the Cretan conquered when he came. He had already come in M.M.II when Kamárais vases were exported to Melos and Thera, and had even reached the mainland, at Tiryns. Cretan ware of M.M.III style was found in the earlier palace of Tiryns, and we see a return gift of less value in the shape of some of the ugly Melian bird-vases, mentioned above, which were found in the Temple-Repositories at Knossos with the snake-goddesses. Melian art can have had very little influence upon that of Crete, and to suppose that the whole Cretan naturalistic movement of M.M.III and L.M.I was inspired by the crude Cycladic attempts at naturalism which we see at Melos and Thera, is impossible. Rather the influence was the other way. It is true that a Melian could give a better impression of a bird than the hideous fowls of the vases, as we see from fresco-fragments with sketches of a dolphin and a badly-drawn but still admirable impression of a flying swallow (Fig. 21). And we see quite nice flowers on a back-turned *prochous* from Phylakopi, as well as on Theraean fragments.[2] But these, and especially the Melian flower-*prochous*, are obvious copies of the simpler Cretan naturalism of M.M.III (not L.M.I). The Cretan influence is at work, and in

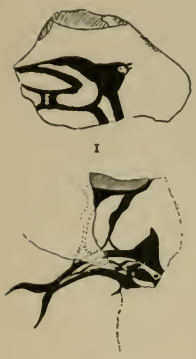

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FIG. 21.—Melos; 1, fresco fragment with sketch of swallow. *Scale* ½. 2, fragment with sketch of dolphin. Phylakopi. *Scale* ¼. *Athens Museum.*

[1] *Cf. Anc. Hist. N.E.*, Pl. III, Fig. 5: Vase in Ashmolean Museum. The design here illustrated is from a vase in the British Museum.

[2] The Thera pottery is mostly in the Louvre. It is practically of the same style as that of Melos.

the next period the native Cycladic art has disappeared, all the pottery being either imported Cretan L.M.I or native imitations of it.

The Cretan influence passed on to the mainland. While the Peloponnesians were still using their native *Urfirnis*-ware the influence of the Cyclades had come to them, and the development of a native style of matt-painted vases (*Mattmalerei*), after the Cycladic manner, resulted. This style is seen in its most charac-

FIG. 22.—Phokis; "Minyan" goblet: from Lianokladi. *Scale* ¼.

teristic mainland form at Aphidna, Argos, Aigina, and in its Cycladic form at Melos, the original home of its inspiration. It lasted on long after the first appearance of the Cretan influence on the mainland in M.M.II, and is found in the Mycenaean shaft-graves side by side with imported Cretan M.M.III and L.M.I ware and local imitations of the latter. But it, too, was finally conquered by the superior Cretan art, which in L.M.I–III made itself the κοινή of the Greek world. And with it went down also the Minyan ware of Central Greece, specially of Orchomenos.

This very distinctive pottery is a fine and homogeneous *bucchero*, at its best light grey in colour, and polished on the outside. It has no slip or varnish, no painted decoration, and very rare incisions. The commonest shapes are a plain goblet standing on a horizontally ribbed stem (Fig. 22), and the *kantharos*-form with high upstanding handles (Fig. 23) which persisted in Greek ceramics till the end, and is often imitated now.

It is obvious that this peculiar and very fine pottery is in no way related to that of the Aegeans. Nor can it be regarded as a local development of the native *Urfirnis* of the mainland. The Peloponnesian potters imitated it at Argos (where it was much used), producing a much blacker and coarser ware. It is evidently an intruding style from without, as were the Aegean styles in Greece. And Mr. E. J. Forsdyke has pointed out its affinities with the pottery of Troy.[1] It is, in fact, practically the same thing as the Trojan ware, and, with Mr. Forsdyke, we may regard it as probable that it marks the arrival in Greece of an invading culture-wave from Asia Minor. To talk of it any longer as if it belonged to the "Mycenaean" art-sphere is impossible. To call it "Minyan," as we do, is probably a misnomer, since the Minyae are more likely to have been Minoans than Anatolians. In any case, Mr. Forsdyke's identification is important, and very instructive when taken in connexion with the legends of the Anatolian origin of the Pelopids of Argos.

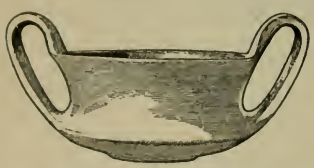


FIG. 23.—"Minyan" *kantharos*; restored. From Argos. *British Museum. Scale* ⅓.

[1] *J.H.S.*, XXXIV (1914), p. 126 *ff.* ("The Pottery called Minyan Ware"). Fig. 24 shews a Trojan silver vase from which the shape of the Minyan *kantharos* evidently descends (*ib.*, p. 146).

Legend, however, lies beyond the bounds of this book, and we must abandon the attractive path of dalliance which these possibilities open to us for the realities of ceramic development!

The centre of the Minyan ware was Central Greece. Its predominance was brought to an end there by the coming of the Cretans with their ceramic art.

The beginning of the Late Bronze Age is marked by the development in Crete of the naturalistic style of the First Late Minoan period, which extended itself to

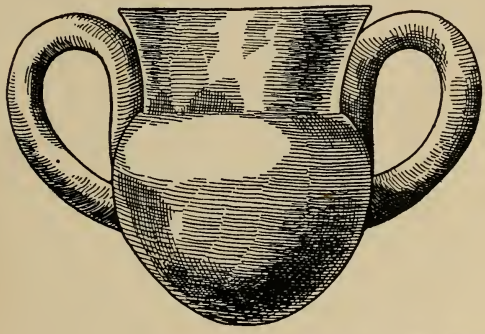


FIG. 24.—Troy; silver vase (one handle restored). *Berlin Museum.*

the islands and to the Greek mainland, and, as we have seen, there completely dominated the local art.

The pottery is marked by the triumph of naturalistic designs, in the dark-on-light style. The last trace of the Kamárais technique is seen in the occasional use of white, which eventually disappears. The naturalism extends itself from the plants of M.M.III to the designs of the sea, and this marine style of decoration is the most characteristic point of the L.M.I–II ceramic. The accurate observation of the artist shews itself in the splendid impressions of octopods, squids, and

nautili, tritons, anemones, sea-pens and shells, amid jagged rocks from which seaweed waves, which cover the best vases of this age. One is positively startled on looking at the famous "Octopus Vase" from Gourniá (Fig. 25). A great octopus with glaring eyes and squirming sucker-covered arms swims straight at us off the vase; behind him are the rocks, the sea-pens, and the trailing weed, all the landscape of the rocky marine pools; even the characteristic fantastic tracery of the sea-worn limestone rocks of the Cretan shore being carefully painted. One seems to be looking through

FIG. 25.—Crete; octopus vase from Gourniá. L.M.I. *Scale c.* ½. *Candia Museum.*

the glass window of a tank in the Naples Aquarium! As good are the argonauts on a vase in the British Museum, found in Egypt (Pl. XXI, 2).[1] But this super-excellence of naturalism was not always maintained. The argonauts on the "Marseilles Vase" (so called because it is preserved in the Museum of the Château Borély)[2] are more "stylized" than are those of the British Museum pot. So are those on a fine jug found at Pseira.[3] The same "stylizing" tendency is seen on

[1] *J.E.A.*, I, Pl. XVI, 1. [2] *Anc. Hist. N.E.*, Pl. III, 4.
[3] SEAGER, *Pseira*, Fig. 13.

1 3 4 2

FIG. 26.—Crete. 1, jug with dolphins; Pseira. 2, jug; Palaikastro. *Scale* $\frac{1}{8}$ 3, vase; Pseira.

a " filler "-vase, also from Pseira, which shews a design of dolphins swimming in orderly fashion, one straight up, the next straight down, amid honeycomb-like "stylized" rocks and seaweed that is too fantastically arranged [1] (Fig. 26, 1). The Gourniá vase has no "design" carefully arranged ; it is a true picture, a real impression-transcript of marine life. The rocks and seaweed, starfish and whelks, on another "filler," from Palaikastro, now (Fig. 26, 2),[2] are distinctly inferior again ; the work is becoming hasty and sketchy. And so we have all kinds of work, indifferent as well as good ; we need not multiply examples. Poor and bad work, however, is rare, and there is always a touch of truth to nature about an L.M.I marine design which easily differentiates it from the hopelessly stylized and uninspired designs of L.M.II.

Plant-designs we see which are very beautiful, and less severely simple than those of M.M.III. Waving palms ornament a fine " filler " from Pseira,[3] grasses are a common form of decoration on pots from Knossos and Zakro,[4] ivy-leaves twine round many a bowl,[5] and the crocus and lily occur.[6] With these we see such emblems as the double-axe, and, often on the same vase, non-imitative designs, such as zigzags and spots (Fig. 27), and the spiral pattern, which at this period attains a real magnificence of curve and coil. How effective the pattern can be we see on a great vase from Pseira[7] (Fig. 26, 3). This vase has a peculiar moulded

[1] *Ibid.*, Fig. 10.

[2] *B.S.A. Ann.*, IX, p. 311, Fig. 10.

[3] *Pseira*, Fig. 8.

[4] *J.H.S.*, 1903, XXIII, p. 253, Fig. 17.

[5] *Ibid.*, Fig. 17.

[6] *J.H.S.*, 1902, Pl. XII, 2. These wind-blown and contorted lily blossoms are a notable achievement in art. We may compare them with the more formal Egyptian designs which were their inspiration, and see how, though the Minoan plants are more life-like than those of the Egyptian artist, they are not so accurately drawn or so faithful to nature. The fact is characteristic of Minoan art.

[7] *Pseira*, Fig. 9.

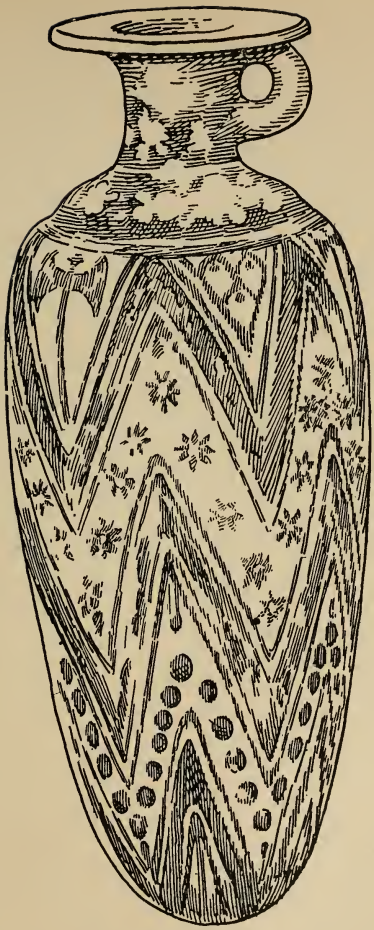


FIG. 27.—Crete; jug from Gourniá, L.M.I. *Scale* $\frac{2}{3}$.
Candia Museum.

lip, that reminds us of the Middle Minoan "Viennese pastry" kind of pottery. The spiral is often directly combined with actual plant-forms, just as it was, at precisely the same period, on the scarabs of the early XVIIIth Dynasty in Egypt.

The forms of the vases are varied. We see the first appearance of two new types, the *Bügelkanne* and the "Filler." The *Bügelkanne* (Fig. 29, 2, 3) originated in the big two-handled jar with pinched-in mouth which was common in the M.M.III period (Fig. 39, 6). Dr. Reisinger has connected the two forms,[1] but he has not shewn how the *Bügelkanne* actually came into existence. As Mr. Forsdyke has pointed out to me, its peculiar form—with the neck where the mouth should be, between the two handles, stopped up, and a small spout stuck out lower down—is easily explained. The M.M.III people had "corked" their wine- or oil-jars in the usual way—with clay over the stopper. It was always a trouble to remove this stopping. So they left it and adopted the easier method of boring a hole in the vase lower down, into which they inserted a tube or siphon. Then somebody imitated the whole arrangement in a vase, and produced a pot with its proper mouth permanently stopped up and a tube-spout at the side. The idea "caught on," and the *Bügelkanne* was henceforward one of the commonest types of Greek Bronze Age ceramic.

The "Filler" (Figs. 26, 4; 28) was perhaps a vase used for filling larger pots with liquid, and has a small hole at the bottom for this purpose. In its simplest form it is conical, with a broad mouth, and has a small handle at the top, exactly resembling a "beer-warmer." In a more developed form the body of the vase swells out, there is a shoulder-ring, and the neck is narrow and the mouth small. The form is in both cases derived from a metal original, and we can imagine that the vase was

[1] *Kretische Vasenmalerei*, p. 24.

first made in bronze or gold for use at the tables of princes. Such metal "fillers" we see were exported to Egypt; they appear among the gifts of the Minoan ambassadors, the Keftians, of whom we have already spoken (p. 58), in the tomb of Rekhmara at Egyptian Thebes. And at the court of Minos himself we see on the famous Knossian fresco (Fig. 71) the young Cup-bearer proudly bearing a long "filler" of silver to his lord. The animal-headed *rhyton*, which was probably of Syrian origin, occurs in pottery: a fine bull's head rhyton was found at Gourniá. And later on we shall discuss the Enkòmi rhytons of faience (p. 105).

FIG. 28.—Crete; filler from Palaikastro. *Scale* ⅓. *Candia Museum.*

We find also a fine form imitating a squat vase of stone; the British Museum pot with the argonauts, already mentioned (p. 90), is a good specimen.

These forms are equally characteristic of the Second Late Minoan period, and the fine naturalistic designs are found also in that period, though they are usually more conventionalized than in L.M.I. We are, however, often

uncertain whether a vase with the marine designs is to be assigned to "L.M.I" or "L.M.II," if we do not know its *provenance*. But in general it may be said that the more naturalistic the design is the more likely it is to belong to the earlier period. And the presence of white in the design is decisive as to the date.

I have spoken of "L.M.I" as earlier than "L.M.II." It is so, at Knossos. But elsewhere we cannot doubt that L.M.I. styles continued contemporaneously with those of L.M.II. This is the case at Pseira, where L.M.I is succeeded by L.M.III, and the true L.M.II style does not appear.[1] The explanation is that L.M.II was really a development of L.M.I peculiar to Knossos, and often unrepresented elsewhere. When it occurs elsewhere we are dealing with importations from Knossos. Being a development of L.M.I, it began later than that style but probably came to an end at about the same time. It is therefore difficult to say whether a pot is "L.M.I" or "L.M.II" unless the distinctive peculiarities of one or the other style are strongly marked in its design. For objects other than pots the difficulty is, of course, great; we can only class most of the remains of the later Knossian Palace as L.M.II, because they are Knossian, and regard similar objects from Phaistos, Hagia Triada, or Mycenae, as L.M.I. And the pottery found with these is, as we should expect, of the L.M.I type. At Knossos the distinction between the two periods is marked by a second remodelling of the Palace at the beginning of L.M.II, which left it practically in the state in which we find it now.

The chief characteristic of the pottery of L.M.II is its greater "stylization" and conventionalization, which goes hand in hand with a quality which we can only call "rococo." The art of the splendidly remodelled Palace is a rococo art. The ceramic artists have lost a great deal of the naturalistic beauty of the designs of M.M.III and L.M.I, and they have

[1] SEAGER, *Pseira*, p. 11.

purposely abandoned it in the pride of their hearts. They prefer more imperial gauds, and have passed on to a more splendid but at the same time somewhat meretricious style of decoration. There is a pompous stiffness about their work; it is rococo; and when it is fantastic it can even be "baroque." And yet—as rococo

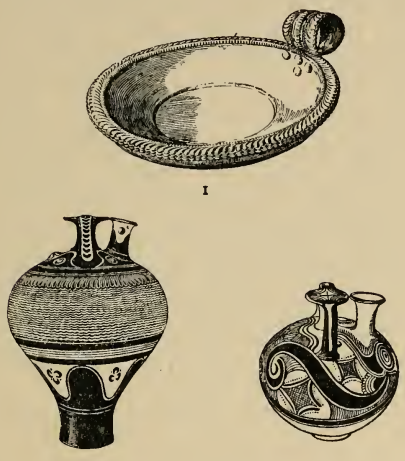


FIG. 29.—Crete. 1, bronze bowl with embossed handle and rim; Knossos. *Scale* $\frac{1}{3}$. 2, L.M.II *Bügelkanne*, with painted imitation of embossed metal-work. *Scale c.* $\frac{1}{3}$. 3, L.M.III *Bügelkanne*. *Scale* $\frac{1}{3}$. *Candia Museum.*

work can be—it is very fine. The evidently splendid glyptic art of the time (of which we possess so few specimens) provided the "Palace" potter with grand forms and the vase-painter with a grand ornament in the curved line-decoration that often follows the shoulder of a vase, imitating embossed relief-work (Figs. 29, 30). The spiral and wave (*kymation*) designs sweep round the vase, and the plant-designs of lilies and palms (some-

times in relief), stiff and conventional though they are, are splendidly decorative (Fig. 30, 2). So, too, the octopods of L.M.II, though all the wonderful charm of the L.M.I picture on the pot from Gourniá has gone, and the tentacles of the animal have become petrified in a fixed spiral line, while other spirals and annules, which seem to have become detached from the octopus, fill up the ground of the design (Fig. 30, 3) instead of the rocks and seaweed of the Gourniá vase and its congeners, which, however, were probably still being made elsewhere. As yet only Knossos preferred her own conventional style. In other vases we see the Knossian artist proceeding to what Sir Arthur Evans has well described as an "architectonic" style of vase-decoration. Motives of architectonic art, carved stone friezes from the walls of the Great Palace, are imitated on the surface of a pot (Fig. 30, 1). This is a development quite peculiar to Knossos, and it is the least pleasing of all. These typical L.M.II vases are mostly very large; they are small *pithoi*. The type was employed also in the L.M.I style, as we see from a beautiful vase from Pseira, on which naturalistic olive-sprigs alternate with double oxen and bulls' heads, with spirals below, to form one of the finest designs of Minoan ceramic art.[1] One prefers it to its Knossian rivals. And it is, with its use of white to heighten the contrasts of the design, even more gorgeous than they are. But the Knossians would have no colour in their ornament other than the plain lustrous red-to-black on the buff surface of the vase. Their taste was perhaps better in this respect, but their ornament was weaker, fine though the general effect is.

The ordinary *pithoi*, of which such large numbers were found at Knossos, were thicker-walled and smaller than those of the Middle Minoan period; their relief-decoration was also simpler (Pl. VIII, 1; XXV, 1).

[1] *Pseira*, Pl. VII.

1 2 3

FIG. 30.—Crete. L.M.II vases from the Royal Tomb, Isopata, with imitation of embossing on shoulder. 1 has also architectonic decoration. *Scale* $\frac{1}{8}$. 2, conventionalized plants. *Scale* $\frac{1}{8}$. 3, conventionalized octopods. *Scale* $\frac{1}{10}$. *Candia Museum.*

I have spoken above of L.M.I vases being found at Mycenae. This was in the shaft-graves, the contents of which can be dated by their means to the same age as the First Late Minoan period. And the other objects of art found in the shaft-graves—especially the vases, *etc.*, of precious metal—agree so absolutely in their style with those of the I–II Late Minoan period found at Knossos and elsewhere in Crete that there is no doubt as to the contemporaneity of the Mycenaean graves with the earlier stages of the Cretan "Palace period." But not only at Mycenae have L.M.I vases been found. At Melos, in the ruins of the Third City of Phylakopi, they occur, and the recently renewed excavations there (1911) have brought to light many remains of the time when at Knossos L.M.I was passing into L.M.II. The German excavations at Kakóvatos (Old Pylos) have also revealed fine Cretan vases of the same period of transition.[1] And at Melos and Tiryns we see Cretan artists at work decorating palace-walls with frescoes of the kind usual at this time at Knossos; we need only mention the Melian fresco of the flying-fish (Pl. XXX, 1),[2] and the earlier Tirynthian frescoes (Fig. 70).[3]

The influence of Cretan art upon the native artists of the islands and the mainland is already apparent. From one or two peculiarities in the Tirynthian frescoes we might be inclined to think them the product of a good native imitator of Cretan wall-painting, but it is far more probable that the work was carried out by a Cretan. And the discoverers have seemed inclined to regard the vases of Kakóvatos as local imitations; but for this one can see no proof; they are thoroughly Cretan. Indubitable imitations of Cretan work in pottery are especially noticeable at Phylakopi. They are easily distinguishable from their Cretan originals by their clay and by their paint, as well as by their clumsier

[1] *Ath. Mitt.*, XXXIV (1909), Pl. XVI *ff.*

[2] *Phylakopi*, Pl. III.

[3] Rodenwaldt, *Tiryns*, II, Pl. 1.

style. The Melian potter had not the fine clay of Crete ; his was more porous. And on it he could never imitate the lustrous varnish-paint of Crete ; his matt-black and red were the same as in the previous period. We cannot suppose that a Kakóvatos potter would have been more successful as an imitator than were those of Melos ; surely he could never have produced such perfect imitations of the "Palace" pottery as the Old Pylos vases would be. When the Peloponnesian potter imitated other models of non-Cretan origin his work is unmistakably an imitation, as in the case of the "Argive" version of Minyan ware, which has already been mentioned. The Melian potters also imitated the Minyan ware, and their black and coarse imitation is as easily distinguishable from the fine grey original, specimens of which, of this time, have been found at Melos, or as is their imitation of "L.M.I–II." Some of the apparently L.M.I pots found at Mycenae may be local imitations, but the fact is not very apparent. The crude local "Mattmalerei" ware there, which is found in the shaft-graves together with the vases of Cretan style, retains its characteristics uninfluenced ; but it seems to have died out shortly afterwards, as did also the Minyan style, when both were supplanted by the common Greek pottery, derived from L.M.I, which we know as "L.M.III."

In the Third Late Minoan period our interest largely leaves Crete for the mainland. For the second, perhaps for the third time, fire and sword descended upon Knossos, and its fair walls were laid waste (*c.* 1400 B.C.). But now the destruction was thorough. The palace did not rise again from its ruins. And in the period of "partial reoccupation" that followed, as well as from the graves of Zafer Papoura, we see that after the catastrophe Cretan art was (though with some differences) the same as that of the mainland and the islands which we call "Late Mycenaean," retaining for

Crete the title "Third Late Minoan." The new style of art was probably of mainland origin, and was evolved from the "Early Mycenaean" form of the Cretan art of the First Late Minoan period. Crete had taken her art to the mainland,[1] and now takes back the mainlanders' modification of it.

In the reign of Akhenaton the heretic (1380–1362 B.C.) we find in the ruins of his city at Tell el-Amarna, which he built, and which was deserted soon after his death and never re-inhabited, the heaps of sherds discovered by Prof. Petrie,[2] which are purely L.M.III, or rather mainland Mycenaean, in type. These sherds do not even belong to a transition between L.M.II and L.M.III; they are fully developed Mycenaean of the same kind as the vases found at Ialysos in Rhodes and presented to the British Museum by John Ruskin (p. 7). These Ialysos vases are dated by scarabs found with them to the reign of Akhenaton's father, Amenhetep III (*c.* 1412–1376 B.C.). The Ialysos pots are not Cretan, nor, apparently, are the sherds from Tell el-Amarna. And the development of the L.M.III or Mycenaean style on the mainland and in the islands out of the transplanted L.M.I may have begun before the fall of Knossos. There is evidence in favour of this in a vase found at Gurob by Petrie in the grave of the lady Maket, who lived in the reign of Thothmes III.[3] This vase does not seem to be of Cretan, but of mainland Mycenaean type, but at the same time its design of ivy-leaves is common in L.M.I. We take it therefore to be a specimen of the Mycenaean transition from L.M.I to L.M.III. The Mycenaean or L.M.III style may then have been developing as early as 1450, whereas Knossos cannot have fallen till after

[1] Forsdyke, *J.H.S.*, XXXI, pp. 110 *ff.*; Hall, *Ancient History of the Near East*, p. 65.

[2] See p. 22.

[3] Petrie, *Illahun, Kahun, and Gurob*, Pl. XXVI, 44.

that date. And it may not have fallen till after 1400. But it is improbable that the catastrophe took place very long after, otherwise L.M.II sherds would most probably have been found at Tell el-Amarna, where they are entirely absent.

We seem, then, not to be justified in continuing to speak of the new style as "Minoan," and calling it "L.M.III" at all. That is so as regards the greater part of the Greek world, but the Cretan pottery of the new style, the objects found with it, and the strata in which it is found, may still be called "L.M.III." The true L.M.III ware of Crete differs somewhat from the true Mycenaean wares. And Cretan civilization, though fallen from its high estate, still preserves something of its national character, and may still be called Minoan.

The Mycenaean ceramic style is, roughly speaking, a degenerate form of L.M.I. The naturalistic designs of the preceding period are conventionalized into a kind of shorthand. The octopus, the triton-shell, the flowers, progressively alter and degenerate in form till they are hardly recognizable.[1] A new naturalistic design of birds, shewn not flying but picking up worms or seeds from the ground, appears, which is characteristic of Crete, and passed thence to Philistia or Palestine with the Cretan Philistine invaders at the beginning of the twelfth century.[2] Among the forms the *Bügelkanne* (Fig. 29, 3) and an *askos*-shape which we have already seen in the "Maket-vase" (p. 102), are the most notable survivors; while a new "champagne-glass" kalyx-form appears, which Mr. Forsdyke thinks is derived from the Minyan goblet (see p. 87);[3] it

[1] See the illustrations in E. H. Hall, *Decorative Art of Crete*, pp. 42–45.

[2] See pp. 43, 106.

[3] This again is probably connected with the Hittite "champagne glass" form discovered by Hogarth at Carchemish (*Illustr. Lond. News*, Jan. 24, 1914).

is perhaps of all the most characteristic form of this period; and is specially typical of the Ialysos vases (Figs. 31; 37, 1). Mr. Forsdyke has pointed out to me that in its earlier forms it is without decoration, like its Minyan prototypes; later we see, besides octopods and other Mycenaean designs on the body of the vase, a row of bands round the stem, which I consider to represent in all probability the horizontal flutings of the Minyan goblet-stem. A new form is a small amphora (Fig. 32), often with a design of concentric circles which foreshadows later Cyprian patterns. The designs, though conventional, are still good, and the colour of the glaze-paint fine. We have not yet reached the period of decadence.

FIG. 31.—Cyprus; Mycenaean (L.M.III) *kalyx* with octopus design; from Curium. *Scale* ⅓. *British Museum.*

Before it began Mycenaean art rested in a state of immobility for some two centuries. During this period, though pottery altered, in Crete at least the models supplied by the great period of Knossian art were still followed. This we see from the graves at Zafer Papoura, discovered by Sir Arthur Evans,[1] which have yielded most interesting remains of the fourteenth century B.C. Though Knossos was destroyed and abandoned except for a short period of partial re-occupation, the local princes could still possess good objects of art, and could be buried with them with a certain amount of funerary state. The

FIG. 32.—Mycenaean (L.M.III) *amphora* with "embossing" design and circles. Cyprus. *Scale* ⅓.

[1] *Prehistoric Tombs of Knossos*, p. 1 *ff.*

pottery shews its connexion with that of L.M.II, thus differing from Mycenaean ware found elsewhere, and fine bronze vases and inlaid swords (one with a naturalistic engraving of wild goats and lions; Fig. 105) are closely reminiscent of the older and finer objects of the same class. We do not find in the Zafer Papoura pottery the decadent forms of naturalistic objects which we

FIG. 33.—Cyprus; late Mycenaean (L.M.III) filler. *Scale* $\frac{1}{8}$.

FIG. 34.—Cyprus; late Mycenaean *krater* with chariot design. From Enkòmi. *British Museum*. *Scale* $\frac{1}{8}$.

have noted above; they are at first characteristic of the mainland and island pottery.

The Aegean pottery from Cyprus seems to belong to two distinct periods, an earlier and a later. The fine faience rhytons from Enkòmi, in the British Museum (Pl. XXII), are of course early, of good "Minoan" period. That in the form of a horse's head is especially beautiful. Though much of the ordinary pottery is quite good of its kind, resembling that of Ialysos (Figs. 31, 32, 33), and no doubt contemporary with it, there are also many late-Mycenaean vases (*kraters*), usually large and perhaps used for cremation-burials, which are

extremely decadent in form and decoration, with motives often derived from the chariot-vase frescoes of the mainland palaces (Figs. 34, 35). Such designs, with chariots, horses, and human beings, are unknown to the great ceramic art of the Minoan age. A critical examination of these most interesting remains would occupy far more space than is at my disposal in this book, and nothing more can be said than that in these graves we seem to be dealing with objects belonging to

FIG. 35.—Cyprus; late Mycenaean *krater* from Enkòmi. *British Museum. Scale* $\frac{1}{10}$.

FIG. 36.—Crete; bird-cup Palaikastro (L.M.III).

two distinct periods, of which the earlier belongs to the beginning, the later to the end, of the Mycenaean age. That the earlier objects are all heirlooms is hardly possible.

The tombs of Enkòmi mark the easternmost extension of the pure Minoan-Mycenaean culture. Recent excavations in Palestine have brought to light there remains of a sub-Mycenaean art, whose pottery is debased L.M.III. Ordinary Late-Mycenaean *skyphoi* are common, and besides the bird-design, which we have met at Palaikastro (Fig. 36; see p. 103), the elongated rosette with "triglyph" in the centre, which is so characteristically Minoan (see Fig. 30, 1), occurs as an ornament. This pottery can only be

British Mus[illegible]

CYPRUS

FAÏENCE RHYTONS FROM ENKÓMI

(Scale : 1/4th)

assigned to the Philistines, who traditionally came from Kaphtor (?=Keftiu), and are certainly identical with the Aegean-Anatolian Pulesatha or Puleshti (Pelishtim) who attacked Egypt at the beginning of the twelfth century.[1]

The Mycenaean settlements at Troy and in Thessaly, which mark the northern extension of Aegean culture at this time, do not yield us any very remarkable results in the domain of pottery. The imported Mycenaean wares now for the first time were used alongside the native pottery in Thessaly, where at last the bronze-using culture of the Aegean had supplanted the native Neolithic civilization. But not until it had itself reached the period of quiescence in development that presaged its degeneration and downfall.

Relations with the West certainly existed, though we are dealing rather with the results of commercial influence than of actual civilization when we find L.M. III vases in Sicily. But legends testify that attempts at Cretan colonization in Sicily and Italy had been made in the days of the Minoan thalassocracy. It is the fact that Mycenaean pottery has been found in Messapia. But we can hardly find proof even of Aegean commerce, much less of colonization, at the far head of the Adriatic in the vases found at Torcello. Are not these more probably Cretan pots brought back as curiosities by some returned Venetian *proveditore?*

With the extension of Mycenaean culture and art, itself originally Cretan and Minoan, over the whole Greek world, the great period of the Greek Bronze Age came to an end. A common static civilization, inferior in most respects to the splendid dynamic Minoan-Mycenaean culture of the two preceding centuries, maintained its equilibrium everywhere in Greece from about 1350 to 1250 B.C., when warlike convulsions

[1] See Hall, *P.S.B.A.*, XXXI (1909), p. 233 *ff.*; Macalister, *The Philistines.*

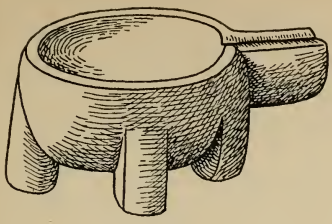
broke out in the Mediterranean lands which seriously affected the security even of Egypt, and brought to Greece devastation and the speedy decadence of her ancient civilization.

FIG. 37.—Crete; late Mycenaean *kalyx* and *krater*: Palaikastro. *Candia Museum.* *Scale*, 1, $\frac{1}{10}$; 2, $\frac{1}{15}$.

The subject of the decadence of the Minoan-Mycenaean culture is too complicated and our knowledge too vague and too open to argument and varying opinions to be treated satisfactorily in a short popular book. Suffice it to say that in the pottery of the period we can roughly trace a decadence that presumably set in in the thirteenth century, and produced various local sub-Mycenaean styles, which are eventually overlaid by the Geometric pottery of the Early Iron Age. In the development of this they exercised a very great influence, and in the succeeding "Proto-Corinthian" style of the eighth and the seventh centuries we see undoubted traces of the old Mycenaean ceramic art. The technique of vase-painting remains the same; the Minoan tradition was never lost.

From this chapter we have seen how important a place the study of pottery takes in the reconstruction of prehistoric Greek culture. Of all things, perhaps, pottery is the most indestructible, in spite of its being so easily breakable, for it can rarely be ground to powder. The small slightly curved sherd has great resisting power; the earth cannot destroy it, nor can it rust away, and it is never purposely carried off or melted down for the value of its material, the fate that has attacked most of the works of the Minoan metallurgists. In this case

FIG. 38.—Crete; Late Mycenaean *lebes*: Palaikastro. *Candia Museum.*



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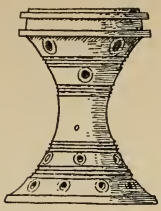

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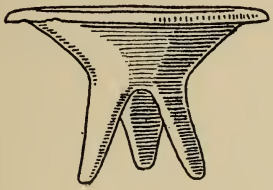

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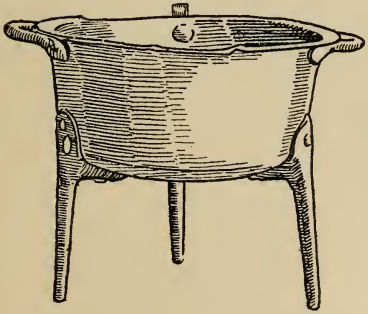

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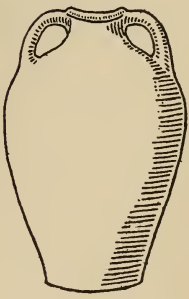

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FIG. 39.—Ordinary utensils: 1, stone vessel; Troy. *Scale* $\frac{1}{10}$. 2, pottery tripod cooking vessel; Gourniá. *Scale* $\frac{1}{8}$. 3, bronze tripod cooking vessel; Gourniá. *Scale* $\frac{1}{8}$. 4, pottery cooking vessel; Troy. *Scale* $\frac{1}{10}$. 5, pottery drainpipe; Gourniá. *Scale* $\frac{1}{8}$. 6, ordinary undecorated vase; Gourniá. *Scale* $\frac{1}{8}$.

the earthen pot has survived the brazen, and the humble pottery vase has been able to tell us much as to the probable shape and style of the metal vases which it imitated. What the study of the millions of sherds which the dust-heaps of Cretan palaces, in addition to the perfect or broken vases that the palace-rooms and tombs contain, has revealed to us, we have seen.

Naturally, we have hitherto spoken only of the distinctive styles of the finer pottery which have helped

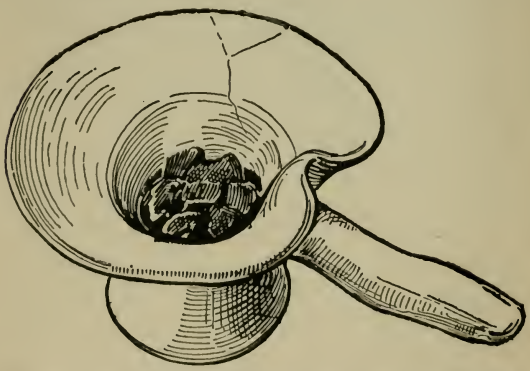

FIG. 40.—Crete; pottery censer or chafing dish. From Zafer Papoura. *Candia Museum. Scale* ⅓.

us so much to reconstruct the story of prehistoric Greek culture. But though the finer wares were certainly used for the most ordinary purposes, at all periods rough undecorated ware (in L.M.III, usually red) was also used, and we are beginning to be able to sort this out also. The town-ruins of Crete have proved veritable storehouses of the ordinary rough ware of everyday use, especially Gourniá. Rouleaux of small cups have been found, the "tea-cups" of the ordinary Minoan household. Basins, pans, saucepans,

and kettles are common, a particular form of tripod kettle having evidently been popular (Fig. 39). The Minoans used pottery for purposes for which we usually employ glass, wood, and metal. As in modern Egypt, boxes and cupboards were made of pottery; besides kettles, fireboxes of hard clay, censers (Fig. 40), lamps (Fig. 41), loom-weights, and fishing-weights of clay are common; besides objects for the manufacture of which we ourselves employ clay, such as gutters, drainpipes (Fig. 39, 5), and bricks. Clay was also used as well as stone to make moulds for casting metal objects.

FIG. 41.—Crete; pottery lamp from Palaikastro.
British Museum. Scale ½.

CHAPTER V.—TOWNS, HOUSES, PALACES, FORTRESSES, ROADS, ETC.

WE now turn to the buildings which were erected by the Aegeans of the Stone and Bronze Ages, the ruins of which have proved to be such storehouses of relics of the art and civilization of their time, and have at the same time of themselves given us moderns such a deep impression of the power and complexity of the civilization that created them. Those of my readers who have visited Knossos and Phaistos, Mycenae, and Orchomenos, will [redacted] easily forget the impression of tremendous energy that they give. And, more than all the palaces of Crete, does the monumental "Treasury of Atreus" at Mycenae give this impression. The Treasury of Atreus is a relic of a civilization greater than that of the Incas and as great as that which produced the temples of Luxor and Karnak. These buildings are the witnesses of a civilization as great and as ordered as that of Egypt. The careful sanitary arrangements of the Palace prove the same thing.

And the development of this great architecture was sudden—an affair, probably, of only some two or three centuries. The first stage of the Middle Minoan period saw its development; in the second and third, probably, it reached its apogee.

In Crete an Early Neolithic house of stone was found at Magasa by Mr. Dawkins, with very rude pottery; and in a cave at a place called Miamu, also in Crete, Signor Taramelli has found perhaps the most primitive Neolithic deposit in Greece. At Knossos and Phaistos

no Neolithic house-ruins have been found, and it is probable that the earliest population there lived in reed huts. The same may be said of the Cyclades, judging by the remains of the Chalcolithic settlement at Phylakopi; but at Pyrgos in Paros remains of stone houses have been found that seem to belong to a rather later period of the Chalcolithic Age. In the Peloponnese rude stone houses, the older of round, the younger of semi-oval plan, have been discovered by Dörpfeld at Olympia, which can justly be regarded as Neolithic, though they may be of comparatively late date (contemporary with the Bronze Age), and similar oval houses have been found at Orchomenos. The Thessalian Neolithic houses were of more developed plan, often well planned, with rectangular rooms, but these are, of course, of late date. These were probably the ancestors of the Achaian palaces at Mycenae and Tiryns, and connected with the very [redacted] "palace" of the same kind at Troy. We have houses of the Third Early Minoan period at Vasiliki in Crete,[1] a building of oval form at Khamaëzi, also in Crete,[2] of the First Middle Minoan period, and the interesting remains of the First and Second Cities at Phylakopi in Melos.[3] The buildings of the first period at Phylakopi (Early Cycladic) are small chambers built of small stones with clay for mortar, and covered by a sort of earthy plaster. These buildings are only found here and there; those of the second period are grouped in regular complexes with narrow streets, forming a town. The streets were footways, on an average one and a half metres wide. As all the roofs have gone, it is most difficult to decide as regards the houses what was covered and what was open court. The walls are often of mere rubble, sometimes

[1] Seager, *Trans. Dept. Arch. Univ. Pennsylvania*, Pt. 3, pp. 213–221.

[2] Xanthoudides, Ἐφ. Ἀρχ., 1906, p. 118 *ff.*, Pl. IX, 4; Noack, *Ovalhaus und Palast in Kreta*, p. 53 *ff.*

[3] *Phylakopi*, pp. 35 *ff.*

of thin stone slabs laid much after the modern " header and stretcher " fashion. In one house the put-log holes for the building-scaffolding still remain. They are placed much closer together than is usual in modern work. The chambers are usually roughly rectangular in shape; the doors had jambs formed of long stone blocks. The method of roofing must be left to conjecture, but it is at least probable that it was much the same as the Aegean roof of to-day—flat-topped, and formed of rafters across which are laid reeds, over

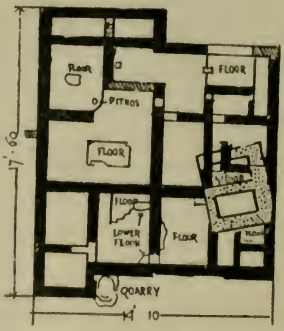

FIG. 42.—Plan of house; Knossos (town).

which is a layer of white earth. A low parapet surrounds the whole roof of the modern house, as the inhabitants sleep on the roof in summer. One or two old *pitharia* (oil-jars) with their bottoms knocked out serve as chimney-pots to let out the smoke of the fires. After heavy rain has turned the earth roof-floor into mud, the inhabitants turn out to roll it flat again with an old piece of stone column or something of the same kind which serves as a roller, and the sun soon dries it again. We may imagine the Bronze Age Melians doing exactly the same thing.

Stone floors are found occasionally; steps, well-cut *antae* or door-jambs, occasionally house-corners of ashlar masonry, and pottery drains. The whole house was originally covered with plaster, no doubt gaily

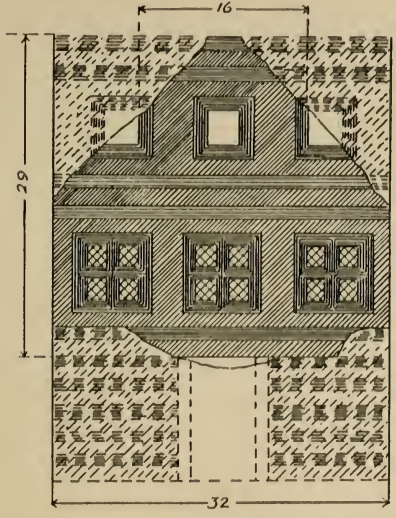

FIG. 43.—Faience model of the front of a house: from Knossos. *Candia Museum. Scale c.* 2 : 1.

The early houses were probably of one storey only, but from a very curious discovery at Knossos we know that two-storied houses were usual there. This is a series of small plaques of faience, which represent the fronts of small flat-topped houses

with large square windows (Fig. 43).[1] They show us that the Greek houses of the Bronze Age were probably very like those of modern Greece, and quite as ugly!

FIG. 44.—Plan of Gourniá (BOYD-HAWES, *Gournid*).

Sun-dried brick was used then as now, as we see at Gourniá. A description of Gourniá, a town of the First Late Minoan period (Plan, Fig. 44), would be very little

[1] *B.S.A. Ann.*, VIII, Figs. 8, 9 (pp. 15, 17).

Photo. E. J. Forsdyke

CRETE

General view of Gournià

different from that already given of Phylakopi. The same narrow ways, paved with small boulders, the same complexes of rectangular houses in which it is difficult to distinguish rooms from yards. Here and there is a pillared room—an advance in architecture; the pillars were necessary to carry the beams on which rested the upper floor, now usual. These pillars are usually of stone and square, but in later houses round stone bases are found on which no doubt rested light wooden pillars, an idea probably borrowed from Egypt; the Minoan bases are exactly like those commonly found in ancient Egyptian house-ruins. Wooden beams were often used in wall-construction to strengthen the rubble, which was covered externally with the usual hard brick earth or plaster. Ashlar masonry is only found in the walls of the "Palace," the princely or official building which occupied the highest and most important place in the town (Pl. XI, 2). Even this good stone-work was covered with plaster.

The impression which this Minoan Pompeii gives (Pll. XXIII; XI, 2) is that it is just the same as a modern Cretan village, on a smaller scale. It has the same tortuous ways, but less than half as wide. The laden beasts that scramble up the stony streets of the modern village of Kavousi, not far off, cannot have passed along the streets of Gourniá; the ancient ways were wide enough only for foot passengers. Beasts must have been unladen outside the town. And the houses may have been higher than the one, or at most two storied, hovels of the modern Cretan villagers. Otherwise the effect must have been much the same. The houses were built haphazard upon the naked rock, the "bare bones of earth," just as they are now; they were built on sharp slopes just as they are now, so that a building may show but one storey in front and three at the back. But everything is smaller than it is to-day; the man of that time seems to have needed less space than he does

now. At Pseira, the island fishing-village nor far from Gourniá, the rooms and streets are extraordinarily small. They go straight down, too, to the edge of the tiny harbour, with no quay of any kind; the walls and streets must have descended sharply into the sea (Pl. XII, 2). There is no room in which, in our slang phrase, "to swing a cat"; everything is curiously cramped and confined.

It is otherwise with the great palaces which the Minoan architects could build for the princes, while the vulgar had to be content with the tiny abodes we have described. If the small towns were more cramped than the most confined of European mediaeval cities, the palaces could be almost as spacious as the buildings of the Italian Renaissance. Small rooms there are in plenty, but there are also fine and lofty chambers, and above all broad stairways designed on the grandest scale.

Yet the great palaces are directly developed from the small-roomed houses of the towns. The same methods of construction are employed in both; the same rubble walls faced with plaster, the same use of wooden beams to strengthen the construction and bear the flat roofs. But the occasional use of ashlar to fix a corner firmly has become a regular use for the facing of walls, and the occasional small pillars in the centre of rooms have become great pillars, often ranked in colonnades. One sees a transition from humble house to mighty palace in the small building on the top of the town-hill of Gourniá which is usually dignified with the name of "palace" (Pl. XI, 2). Here we find ashlar walls on fine foundation blocks, a little colonnade, and an open space with an *exedra* which is a small edition of the great courts of Knossos and Phaistos. The Gourniá "palace" is no doubt a small local imitation of the great palaces. There were doubtless many such; each local chieftain would have his little Versailles, and so in each town the *Residenz* of the *Landesfürst* (or rather *Stadtsfürst*,

CRETE

GENERAL VIEW OF KNOSSOS AND ITS SURROUNDINGS

Photo. Noel Heaton

Burggraf) rose amid and above the homes of his subjects. The great over-kings at Knossos or Phaistos, however, put more distance between themselves and their underlings. Originally Knossos was probably much like Gourniá, a town surmounted by the princely abode. But early in Cretan history, when wealth and power had begun to come to Knossian princes, the common folk were banished from the hill, the town was demolished, and the whole site occupied by a new palace. The townsmen found new abodes on the slopes near by, where some of their houses were discovered by Mr. Hogarth.[1] The same thing seems to have happened at Phaistos, though at Hagia Triada the palace was probably an entirely new foundation.[2] At Knossos the whole top of the town-hill was apparently razed off to make the great flat space which is occupied by the broad open inner court of the palace, the magazines which were the cellars of a building above them which has long disappeared, and the outer court which Sir Arthur Evans has called the Dancing-floor of Ariadne. Had Gourniá ever become the home of powerful princes, the same thing might have happened there. As it was, the chief of Gourniá was only able to remodel his small house in the Knossian style.

The building of the great palaces is to be ascribed, as we have said, in all probability to the Second Middle Minoan period. Of this age we have at Phaistos important existing remains, and at Knossos the earlier work is often found incorporated with that of the Late Minoan age, from which it is difficult to disentangle it. The older work is really the finer of the two. It is better, and it is greater in conception and in execution. Part at least of the magnificent "Stepped Theatral

[1] *B.S.A. Ann.*, VI, p. 70 *ff.*

[2] The neolithic deposits at Knossos and Phaistos show that these two sites were inhabited as towns from the earliest periods (see p. 45).

Area " at Phaistos (Pl. IX, 2) is of the earlier age, as are also the walls and columns of the North Gate at Knossos. The main outlines of the Knossian palace are no doubt Middle Minoan. The later builders elaborated the wonderful complex of passages, chambers, and stairways on the eastern slope of the hill, descending to the Kairatos stream (Fig. 45, 2). But even here the finest thing—the grand stairway leading from the lower rooms to the inner court above on the top of the hill—may well be Middle Minoan. But we feel that long use and occupation has altered, twisted and elaborated an originally simpler into a more complex plan. The later builders made Knossos the Labyrinth. And Hagia Triada, which is of the First Late Minoan period, resembles Knossos in some ways more than does Phaistos, which has preserved more of the Middle Minoan simplicity of plan, though there also the greater part of the existing remains is Late Minoan. It is easier at Phaistos to decide definitely what is Middle Minoan and what is Late Minoan. The great upper court at Phaistos is built over the Middle Minoan magazines, and in front of part of the great stairway are Middle Minoan rooms which were filled up with a sort of beton or concrete of lime, clay, and stones (called by the diggers ἄστρακα-σβεστον) when the theatral area was remodelled. At Hagia Triada too, there were Middle Minoan constructions before the palace was built, but we cannot say that there had been a regular palace there before the Late Minoan building.

The main characteristics of Minoan palace-construction were the central courts, the fine broad stairways of low tread (the easiest stairways that ever one mounted), open columned porticos, walls of rubble or of great stone blocks, set in a light clay mortar and plastered or faced with thin slabs of gypsum, passages paved with the same thin slabs of gypsum, pilaster-bases, of the same gypsum, of double-T shape, round

Photo . H. H.

KNOSSOS

1. Magazine with Pithoi
2. The Great Stairway ≺

pillar bases often of variegated marble, the characteristic light-wells, the careful drainage-system, and

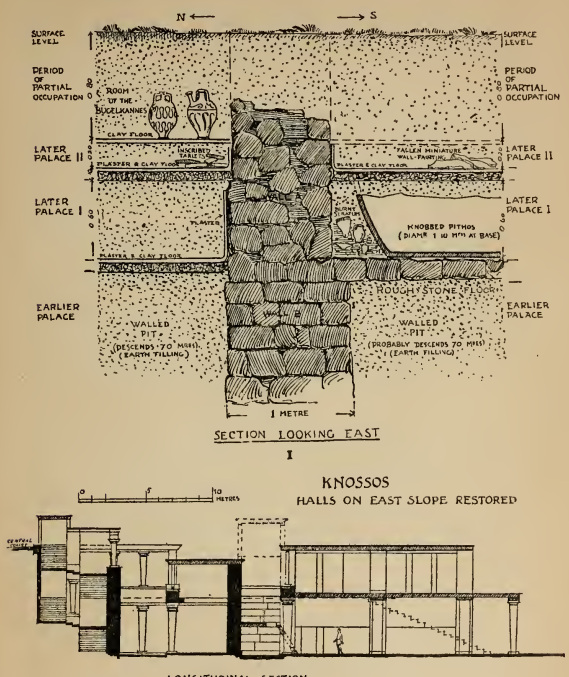

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FIG. 45.—1, section of a portion of the palace excavation, showing stratification (*B.S.A. Ann.*). 2, section of the eastern portion of the palace, showing stairway (*ibid.*).

the curious sunken chambers, approached by steps, which used to be regarded as baths (though it is pretty certain that they were nothing of the kind), and the long

magazines or cellars. The roofs were undoubtedly flat, and the buildings of two, three, or more stories. This is proved not only by the little representations of houses already mentioned (p. 115), and by frescoes which show ladies at windows or in a loggia on an upper storey, but also by the peculiar device of the light-well, which could only be needed in a complex of many-storied buildings to give light to the inner rooms of intermediate and lower floors. It was as much needed as it is in modern "flats" or office-buildings, and wholly distinguishes the Cretan palaces from the later "Homeric" palaces of the mainland, which were low buildings needing no such device. · On a hillside, as at Knossos, a Minoan palace must have looked very like a Tibetan lamassery, or to come nearer home, a modern Greek monastery, though probably the mass of buildings was not quite so regular in outline. Possibly in places it looked very like an ordinary hillside village such as one sees now in Crete, with the flat roof of one chamber forming a small court in front of the loggia or portico of a more recessed chamber of the next storey, but with large square windows, perhaps "glazed" with talc, and with open loggias, instead of mere slits for the admission of air and light. In other places the façade may have risen straight up in many stories as blankly and as boldly to the sky as does that of the Simopetra monastery on Mount Athos. The whole will have been covered with gaily painted plaster.

The windows will have been rectangular, as has been said, as were also the porticoes. The *antae* or pilasters of these were straight, as were also their architraves. The typical "Egyptian" form of door, with its jambs leaning slightly towards each other, so that the door is wider at bottom than at top, though usual in tombs, seems to have been unusual in house-construction. Arched or ogival doors were unknown. On the double-T pilaster-bases of gypsum, already mentioned, the

Photos. H. H.

KNOSSOS

1. Bird's-eye view of the eastern slope
2. Excavating the Western Palace

stone *antae* were faced with wood, and there was possibly a wooden threshold as well, and wooden doors, no doubt often plated with bronze, which have long disappeared. The pillars which bore the roofs of chambers, loggias, and stairways were often of a characteristic Minoan form, round and increasing regularly in girth towards the capital, which was of simple form, consisting of a bulging *torus* surmounted by a square flat cap. At Knossos these were usually painted red, sometimes perhaps blue as well, and no doubt columns existed which have now disappeared which had spiral and zigzag decoration, painted or carved, like the two great half-pillars of the same type which decorated the door of the great tomb called the "Treasury of Atreus" at Mycenae, which are now in the British Museum (Pl. V).

Other pillars of the same type no doubt had capitals like that shown in the frescoes and in the famous pillar of the Gate of the Lions at Mycenae (Pl. II, 1), consisting of what looks like a row of three or four round balks of timber placed crosswise over the top of the pillar. These columns did not always have any bases at all; the round marble bases often found in the rooms probably carried square wooden pillars. Side by side with these typical columns plain square stone pillars were also used, sometimes monolithic, more usually of two or three blocks, the bottom one sometimes in one piece with the paving block from which the column rises, a mode of construction also found in Egypt.[1] For great colonnades these square pillars seem to have been preferred, and it is possible that in the palaces they are often older than the round form.

The central feature of the Minoan palace was the Great Court, the *Binnenhof*, open to the sky, round which the building was erected. This again makes a difference from the "Homeric" palace, which had its

[1] *J.H.S.*, XXV (1905), p. 335; *J.E.A.*, I, p. 197.

αὔλη in front, without buildings around it. The Minoan court at Knossos occupied the razed apex of the old town-mound (p. 119). There was also an outer court or terrace beyond the buildings on one side, and with this was connected the curious triangular "Stepped Theatral Area" (Pl. VIII, 2), which we should be inclined to regard as a grand entrance to the palace rather than as a place for gladiatorial shows, for which it seems too small, though its distant resemblance to a Greek theatre, of which it has been regarded as the prototype, may be granted.

The side of the palace (we are here describing Knossos rather than Phaistos) between the Inner and the Outer Courts seems to have been the more public one, and contained the semi-public rooms and offices, built above the long rows of magazines or cellars. These were hidden behind a fine stone wall, probably blank in its lower storey (that of the magazines) and painted with frescoes. The magazines contained the stores of oil, wine, and grain, in the great *pithoi* or store-vases of pottery which are among the most remarkable remains at Knossos (Pll. VIII, 1; XXV, 1). One of them is in the British Museum (p. 26). In the floors of the magazines and that of the long passage at the back were contrived the "safe-deposits" which held the valuables of the palace: small rectangular sunken pits, faced with stone slabs. These are known by the name of κασέλλαις given them by the diggers. The storey above the magazines and passage (which must have been absolutely dark) may have been occupied by the more public rooms of the building; it has entirely disappeared, as here, on the top of the hill, before excavation the earth barely covered the lower courses of the walls of the magazine. At the back of the passage, which is the centre of the building on this side, certain semi-public rooms faced on to the central court, and among them is a room which may have been a sort of

Photos. H. H.

ARGOS

1. The Lárissa (left) and Aspis (right)

KNOSSOS

2. The Throne of Minos

audience-chamber, with a stone chair of remarkable form occupying the central position against the wall, with on either side of it a low stone bench, the seats of the prince and his counsellors (Pl. XXVII, 1). Opposite the throne descend the steps of a sunken space, under the same roof as the audience-chamber, which was formerly regarded as a bath, but may be, as Professor Mosso has suggested (p. 126), a sanctuary. The walls of the audience-chamber behind the throne are frescoed with a scene of gryphons hunting.

On the opposite side of the inner court is the great complex of the more private portion of the palace, descending the hill towards the river (Fig. 46). This was the abode of the prince, with its grand staircase, and its stately chambers, the "Hall of the Double Axes," the "Queen's Megaron," and the rest. Whether we are to assume a division between a men's and a women's quarter, separated by the crooked "dog's-leg corridor," or not, is uncertain. Is a chamber the stone blocks of which are distinctively marked with the incised sign that looks like a distaff to be regarded as devoted to the womenkind? It is impossible to say, though it is probable enough that the women had a quarter of their own.

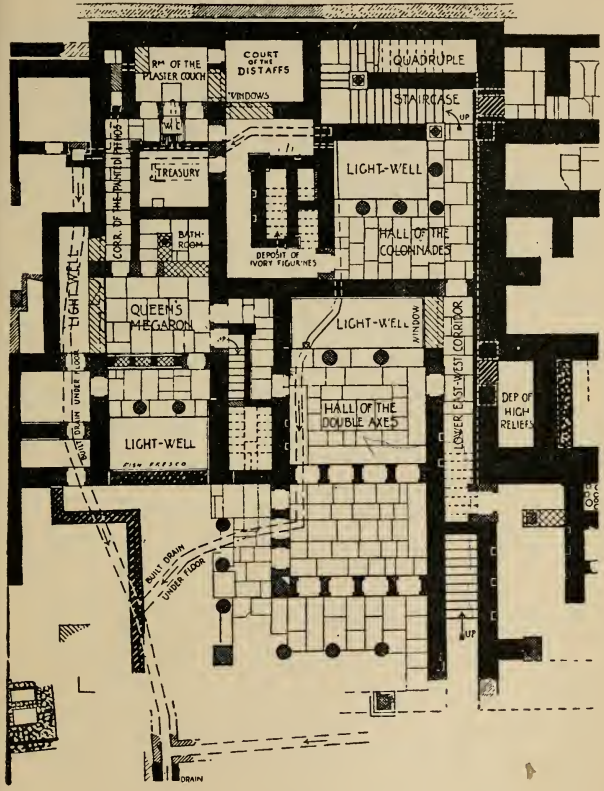
It is in this portion of the Palace that we find some of the most luxurious arrangements. The beautiful wall-slabs and pavements of gypsum and the pillar-bases of marble are mostly here, though it is probable that these themselves were largely concealed by plaster; the ancients had little of our love for the beauty of stone unpainted. Here, too, are the remarkable sanitary arrangements which have so struck modern observers (see Fig. 39, 5; Fig. 46); the closet with its seat and carefully-contrived drain, and the runnels which carried superfluous water by a series of scientifically-designed gutters along the side of a many-angled stair-way down the hillside. But there is no bath like

that at Tiryns, a real bath-chamber with a single mighty slab of porphyry as its floor, in one corner of which is the escape-hole for the water. The Knossian princes seem to have used pottery baths in the ordinary rooms; one was found in the "Queen's Megaron." The sunken chambers with steps leading down to them, which have already been described (there is another, finer than that in the Audience Hall, near the Theatral Area at the north end of the Palace), cannot have been baths, as there is no escape for the water, and, as Dr. Mosso has pointed out, the gypsum-slabs with which they were faced and floored would have been spoilt and disintegrated by water.[1]

At the north end of this part of the Palace lay probably the kitchens and other domestic offices, with pottery drains and sinks, oil-presses, and great *pithoi* containing the oil and wine for the immediate needs of the inhabitants. Here, too, are certain deep square pits which have been regarded as *oubliettes* or dungeons, whether rightly or not it is impossible to say. Another view would be that they are what in a mediaeval castle would be called *garderobes*, that is to say deep pit-privies. A most interesting fact with regard to these pits has just been discovered by Sir Arthur Evans (1913) and that is that they seem to be in a strong-walled portion of the Palace, a sort of keep or *Burgfried*, and that brings us to the question of the fortification of the Palace, at the great North Gate, hard by.

The North Gate, which is of Middle Minoan date, is of very solid construction, and would have served very well for purposes of defence. It is, however, doubtful whether it was primarily intended to be a defensible gate. Outside it is a big portico of square columns, also of early date, and it would seem that its massiveness is merely a trait of Middle Minoan architecture, and has no military significance. Later on

[1] *Palaces of Crete*, p. 64.



KNOSSOS

FIG. 46.—Plan of part of the building on the eastern slope (*B.S.A. Ann.*, VIII, Fig. 29).

its very wideness and fineness was found in some way disadvantageous, and it was narrowed perhaps for military reasons by a third of its original width. It does not look, then, as if, when this gate was originally designed, hostile attack was much feared by the builders of Knossos. And we do not find anything that looks much like fortification either at Phaistos or Hagia Triada. The difference from Tiryns or Mycenae, with their "casemates" and bastions, is indeed great. An interesting comparison has been made between the supposed unfortified character of the Cretan palaces and the absence of inland fortifications in England. Both island-powers, commanding the narrow seas in their vicinity with their ships, and, "encompassed by the inviolate sea," needed "no towers along the steep" to guard their palaces and cities. But the men of continental Greece had to guard against invaders from the North, just as France has to ward herself against Germany and Germany against Russia; and so they fortified their towns and palaces.

This is a very pretty comparison, and, for the great period of the Minoan thalassocracy, it probably is an apt one. This period I take to be the Third Middle Minoan rather than the Second Late Minoan period, which may well have been in reality an age of comparative political weakness and loss of empire. Under the later princes fortifications were probably needed, though perhaps were not always supplied, owing to lack of knowledge and blind confidence; the result we may see in the sack of Knossos. We may perhaps ascribe the narrowing of the North Gate to an attempt at protection made at the eleventh hour. The keep—if it is one—that Sir Arthur Evans has newly found, is probably very early, and antedates the great period of building. That it might well do. England has not always been unfortified. In the Middle Ages it possessed as many inland fortresses as any country in Europe, except,

perhaps, Germany. Private war, civil war, Scottish and Welsh incursions rendered them necessary. So also in Crete before a central power was firmly fixed at Knossos (in the Middle Minoan period, as I believe), fortified walls would be rendered necessary by intestinal feuds, and we may imagine that the earliest towns and royal seats were walled. So that Knossos may have possessed its keep before the top of the hill was razed to make room for the Palace. This keep was then destroyed down to its lower courses, which were covered up and built into the new erections. The big design and fine stonework of the new style as we see it in the North Gate was a modern modification, a civilized adaptation, of the old military style of building. The Middle Minoan North Gate would bear the same relation to an old fortification-gate as an English house-gate of the Renaissance-Tudor style bears to one of the Norman or Edwardian periods. This is hypothesis, but it is probable enough. That Knossos was fortified in the Early Minoan period is rendered probable by the discovery of a vast early well at the south end of the hill. Such a well would have been unnecessary if the land had been altogether peaceful and its hills unfortified. The stream was handy outside the back-door. And there was probably more water in the Kairatos then, than there is now.

These are speculations to which one is inevitably led by the initial speculation as to the cause of the apparently unfortified character of the Cretan palaces. No doubt the early town-walls were not of any very great size or strength; we have no Trojan ravelins or Tirynthian casemates[1] in Crete, or, at any rate, none

[1] These "casemates," however, were not actually intended for purposes of defence, as they are simply the cellars or magazines of the Palace. But the vast size of the stones used, the huge bastions, and the disposition of the entrance-ways shew that Tiryns was really a fortress as well as a palace.

extant. Such fortifications as those at Tiryns (on which see later) we believe to be the work of the Middle Minoan from Crete, who was compelled to build a strong burgh when he landed at Nauplia, and built it to defy not the native enemy alone, but Time itself. At Troy the local conditions no doubt necessitated a very early development of fortification, aided probably by knowledge of the art of earth-embankment brought through Anatolia from Syria and Babylon.

Knossos was then probably unfortified in the II–III Middle and I–II Late Minoan periods. Its surroundings were then no doubt much the same as they are now: groves of olive and carob, fields of wheat and hill slopes covered with vines, with here and there a country-house standing out from among the trees or a village crowning a hill-top. Stone-flagged paths led from the Palace in various directions to outer groups of buildings; along one, which goes to the smaller "Western Palace," we can walk to-day, but, naturally, at the bottom of a cutting eight or nine feet deep. In the Western Palace we find the same complex of buildings in the same style. To the "Royal Villa" on the Kairatos-slope no doubt a formal path also led. In this we have a very good example of a small complete Minoan building of luxurious character; a royal summer-house, in fact. Sir Arthur Evans has drawn an interesting comparison between its plan and that of the Roman basilica.

We have described Knossos fully, as it is the most famous and most characteristic of the Cretan palaces. Its arrangements are generally paralleled at Phaistos. At Hagia Triada there is a great colonnaded court which the Italian excavators have called the *Agora* (Pl. X, 1).

At Hagia Triada also there is a new phenomenon, which we have not met with at Knossos or Phaistos. In the Late Mycenaean age, when the Palace was perhaps already ruined, a new building was placed on the

top of part of it (Pl. X, 2). This is a large rectangular house with a central hall and at either end an antechamber, like the *prodomos* and *opisthodomos* of a Hellenic temple. The presence of the *opisthodomos* differentiates it from the "Homeric" palaces of Tiryns and Mycenae, which otherwise it resembles. But we can hardly refuse to recognize in it a building of this Homeric type, with the addition of a chamber in rear of the *megaron*. It is the solitary Cretan example of the later type of palace which we find in Greece, since a supposed building of the same kind at Gourniá[1] does not seem to be really of this type. We may regard it as a building erected by the conquerors from the mainland, who in the Third Late Minoan period invaded Crete, overthrew the predominance of Knossos, and brought with them their own style of architecture.

How, then, do these later mainland palaces differ from those of Crete? Before the Cretan conquerors came to Tiryns the low hill was inhabited. Remains of a very early circular building have lately been found, a sort of watch-tower probably, *above* which were primitive graves with crouched burials. Then the Cretans at the end of the Middle Minoan period erected upon the hill (which, low as it is, dominates the whole of the flat land around) a palace of their own type. Remains of the oldest palace have lately been discovered.[2] Later on, when admixture with the mainland Greeks had modified the ideas of the foreign princes of the land, another palace was built within the shell of the old strong walls of the Kyklôpes, the central feature of which was a building of the typical northern (or "Homeric style") with a tower-gate or *propylaeum* standing free in front of a square open court or *aulé*, which gave access to the royal hall, with its *αἴθουσα δόμου*, its *πρόδομος*, and its *μέγαρον* of regular Homeric

[1] Oelmann, *Jahrb. Arch. Inst.*, 1912, p. 38 *ff.*

[2] Rodenwaldt, *Tiryns*, II.

type (Fig. 47). But this Homeric palace does not stand alone, as it does at Mycenae and at Hagia Triada. It is surrounded by an irregular complex of halls, chambers, and passages which at once remind us of the Cretan palaces. In the Third City at Phylakopi in Melos we find a similar arrangement; and Achaian *μέγαρον* with these Cretan-looking outbuildings. A similar, much older, palace at Troy has adjoining buildings, but not of the same character. These buildings at Tiryns used to be called the *gynaikeion*, the women's quarters of the Palace. They may have been used for this purpose. The fact that both there and at Phylakopi there is no direct communication between them and the *μέγαρον*, and that at Tiryns there is in them a smaller edition of the larger *αὔλη* and *μέγαρον* is in favour of this view. But it is at least probable that at both places the more complex outbuildings are a survival of the old Cretan style of palace-building, and that these two palaces are therefore combinations of the two styles. Certainly, however un-Cretan the plan of the two *megara* at Tiryns, with their halls, may be, the whole style of construction is thoroughly Cretan, with its gypsum wall-lining, its fine stone paving, and so forth. The Cretans taught the Northern Greeks how to build palaces, though the Northerners liked their own plan to be followed.

This plan, that of the "Homeric House," was native to Northern Greece. We find it first in the chiefs' houses in the Thessalian Neolithic sites. The chief characteristics that differentiate it from the Cretan palace are its smallness, simplicity, and its lowness. The *megaron* probably had but one storey. Its roof was supported by beams resting on four simple columns. And in its centre was the large, open hearth, unknown in Crete. The presence of this hearth testifies to the Northern origin of this type of house. In warmer Crete it was not necessary. The smoke of it

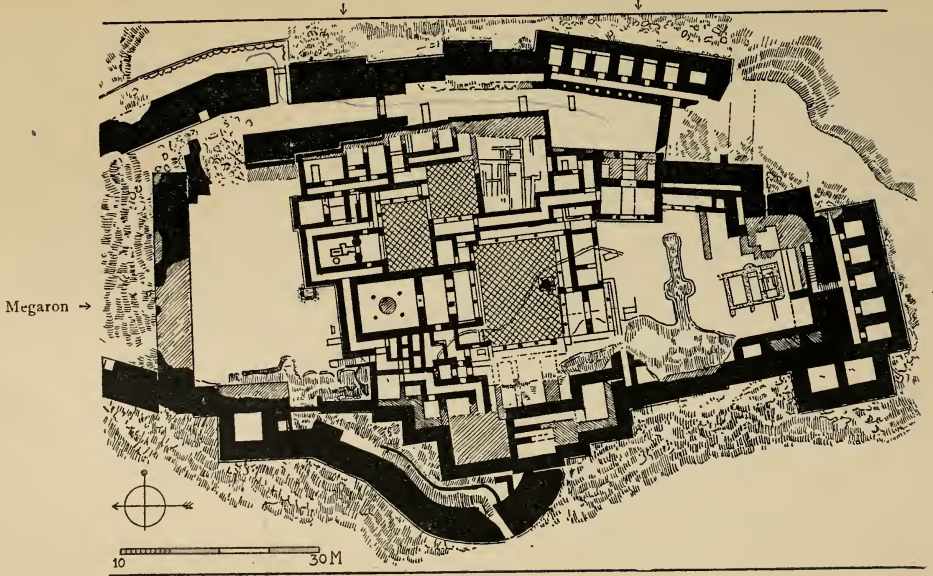


FIG. 47.—Plan of Tiryns.

must have escaped through a hole in the roof, which may have been open or protected by an over-roof or cap, open at the sides. This is the type of house which the Achaian heroes of the *Iliad* inhabited, and it is of Achaian (Thessalian) origin, whether its builders were Cretans working for the later Achaian masters of the land, or, more probably, the "Achaïized" Ionians, ruled by princes of Cretan origin, who inhabited the valley of the Inachos in the Late Mycenaean period, corresponding to the Third Late Minoan period in Greece.

This palace was not built so very long after the later portions of Knossos and Phaistos. The style of its building and its decoration with frescoes of Cretan type shows this. The newly-discovered paintings of the boar-hunt belong, probably, to a later decoration of the old palace, as does also, probably, that of the man leaping over the bull, discovered by Schliemann, which is so very Cretan in character (though perhaps of local workmanship). These frescoes must be regarded as early "Late Mycenaean" or L.M.III; their style in many ways resembles that of the Hagia Triada sarcophagus (p. 172 *ff.*). We cannot place the second, or "Achaian" palace, with its *μέγαρον*, later than the fourteenth or thirteenth century B.C. And the similar hall at Mycenae is no doubt of the same date. So we see that the northern type of building came into its own only three centuries, probably, after the Cretan came to the Argolid. The Trojan palace is much earlier, as it dates from the Early Minoan period, and this may give rise to the speculation whether the "Homeric House" was not introduced into Northern Greece by the users of the "Minyan" pottery (closely related to that of Troy), who came into the land before the Minoans (see p. 88).

We now turn to the fortification of the mainland palaces. The "casemates" of Tiryns (Pl. VII, 2) are

well-known, but it is highly probable that they were not intended for military purposes, but were simply the Palace magazines. They were placed inside the outer wall of the palace as at Knossos, but whereas at Knossos this wall is simply a fine wall built for architectural effect, at Tiryns it is a great one built for military reasons. At Knossos we have an Elizabethan castle, at Tiryns an Edwardian one. And whereas at Knossos the magazines are behind the wall, at Tiryns they are within it, placed in its thickness, so to speak. The stones of which this wall is built are enormous, and are only roughly shaped, instead of finely cut as at Knossos. But they were not piled irregularly on top of one another, as they seem to be now; they were laid in a bed of mortar in regular Minoan fashion, and probably the whole face of the walls was covered with plaster, so that they presented an even front. The thickness of the walls was equally enormous; in places they are from 23 to 26 feet thick. This fact, and the way in which they are disposed, with internal passages, stairways, and sally-ports, shows that they were intended primarily for defence. The main gateway is obviously military. Ascending from the base of the walls by a ramp which is commanded by a huge bastion, one turns sharply round into a way ascending in the reverse direction, commanded by this bastion and by an inner wall. This brings us up to the actual doorway of the castle, of which the huge threshold and jambs of hard breccia still remain in position. One of the jambs is perfect and measures $10\frac{1}{2}$ feet in height by $4\frac{1}{2}$ feet in breadth. In the threshold are the holes for the pivots of the two great doors, no doubt of solid bronze or wood cased in bronze, which have long disappeared. These doors, like all those in antiquity, swung not on hinges but on pivots. Each leaf had a projecting pivot at top and bottom on the side nearest the jamb, and in the threshold and architrave were

holes to receive the pivots. One can see the arrangement in the great bronze doors of the eleventh century, still in use, at Aachen and Hildesheim in Germany.

The two leaves met in the middle of the threshold, and were secured from being forced from outside not merely by a lock (of this we are uncertain), but also by a great bar of bronze, or wooden beam, which was placed when needed on the inside across from one stone jamb to another. In the perfect jamb may be seen the hole for the reception of this bar on that side (Pl. VII, 1).

Past this door the castle was not yet gained, for the way continues between walls from which the enemy could be enfiladed, and then another corner has to be turned into the *propylaea* of the "Inner Courtyard," beyond which, after another right turn, are the *propylaea* of the *aulé* itself. These *propylaea,* though not primarily military in character, were intended for defence as well as habitation. There is nothing like them at Knossos, not even the North Gate is as "military" as they must have been.

One sees the purely warlike nature of the walls of Tiryns, and how the carefully devised protected way through them differs from the perfectly straight and peacefully colonnaded approach to the North Gate of Knossos, which, like a Roman triumphal arch, though no doubt descended from military forebears, was itself of purely "architectural" character, and had no military intention, though, like the Roman arches, it could be adapted for defence if necessary, and no doubt was hastily so adapted in the days of destruction, just as the Roman arches were in the Middle Ages.

At Mycenae a naturally more defensible position needed no such elaborate precautions as those at Tiryns. But here also the whole *enceinte* is fortified by a continuous wall. At the weak part of the castle-palace, where it had to be entered from the lower ground, the great Lion Gate, with its massive stones

(Pl. II, 1), shows an interesting combination of military use and architectural effect. We may compare it with an English castle of the end of the fifteenth century. It stands midway between Tiryns and Knossos, as, let us say, Herstmonceux stands midway between Harlech and Hampton Court.

The Lion Gate may well be later than the walls of Tiryns, though it may be doubted if it is very much later. The thoroughly Cretan design of the pillar (of the type described on p. 123) between two rampant lions as supporters, a design that actually occurs on Cretan seal-stones, shows that it was made by Cretans. The invaders who founded Tiryns no doubt reached and fortified Mycenae not long afterwards. The current idea that the Lion Gate is of much later date, and was erected at the time of a later restoration of the walls, has never seemed to me to have much evidence in its favour, and I am strongly inclined to adopt the conclusion that the gate is of the late Middle Minoan period. A later gate would hardly have been built with these enormous blocks. The stones, though well-squared, which those of Tiryns are not, would surely have been smaller in the Late Minoan or "Mycenaean" period, and more equal and regular in shape than they are. Later masonry would, in fact, be like that of the "Treasuries," or of the walls of the Sixth City at Troy.[1]

The greater part of the citadel-walls are built of much rougher blocks than those of the gate; resembling those of Tiryns, but smaller. This points also to a date not long after that of the building of Tiryns. The true polygonal masonry which is also found in the citadel-walls and in a great tower on the south side is, of

[1] This later masonry is purely Cretan in character. We have in Crete no great walls like those of Tiryns or Mycenae, but this is probably due to the fact that the islanders in their own homes never felt the need of such powerful protection against attack.

course, very much later, being certainly Early Hellenic, as all this careful Greek polygonal masonry is.

There is a postern-gate at Mycenae, as there was at Tiryns, though this is destroyed. The Mycenaean postern is preserved, and is a simple *trilithon* (Pl. II, 2), obviously of the same date as the Lion Gate. A deep well with descending steps, close by, shews that the acropolis was properly provided with water during the many sieges which it probably underwent.

There is another Greek fortress-city with Cyclopean walls worth special mention on the island of Gha or Goulás, which used to rise out of the waters of Lake Kopais before the modern drainage-operations had restored the plain to its probable condition in Mycenaean days. This is perhaps the ancient city of Arnê.

But more interesting are the walls of Phylakopi, the prehistoric town in Melos. Here we find on the Second City a rampart composed of two well-built parallel walls, each six feet thick and six feet distant from one another. They are connected by cross-walls, and the interspaces are filled with rubble. There are remains of a stepped postern cunningly devised, like the entrance to Tiryns on a small scale. In the period of Cretan domination, when the Third City was built, the walls underwent important modifications which did not, however, alter its character.

Ring-walls of this kind were the usual defence of the larger villages of the islands ; there are good examples at Chalandriane (Syros) and in Siphnos. Of these Chalandriane is the oldest. The walls of the Neolithic inhabitants of Thessaly, as at Dimíni and Sesklo, resemble these, but must be of very much later date. "Their resemblance to the island fortifications must be admitted, and they may ultimately prove to have the same origin."[1]

The earlier fortifications of Troy hardly concern

[1] *Prehistoric Thessaly*, p. 218.

this book. Until Aegean influence reached the Troad and the Sixth City was built on the hill of Hissarlik, the Trojan culture was not connected in any way with that of the southern Aegean. The great crude-brick walls, built only on a stone foundation, of the Second City, which are probably contemporary with the end of the Early Minoan period in Crete, can hardly be regarded as in any way typical of the Aegean town-fortifications of that time; we have, at any rate, nothing like them in Crete or the islands to shew that they were. Their analogies are more probably to be found in Asia, and their nearest relatives in the brick walls of Syria and Babylonia. Yet the presence of the great *μέγαρον* in the Second City argues a connexion with North-Greek architectural ideas at Troy in the early period.

It is otherwise when we come to the splendid stone walls of the larger Sixth City. When first discovered, it seemed impossible that these, with their neat and fine ashlar masonry, should belong to the same period as the Cyclopean walls of Tiryns and Mycenae. Yet the character of the remains found within the walls and in the houses of the Sixth City shewed that they were Mycenaean in date. And Knossos and Phaistos have now shewn us that this splendid masonry is characteristic of the Middle and Late Minoan Ages in Crete. In the Middle Minoan (Early Mycenaean) period, Tiryns and Mycenae were built with the huge stones that the Cretans probably used for their colonial fortifications; then, in the Late Minoan (Middle and Late Mycenaean) period the fine architectural style which we see earlier in the North Gate of Knossos was used by the Mycenaeans, now entirely Aegean in their culture, for the building of fortifications, as we see at Troy. We see that the Sixth City shews us rather more than mere Minoan or Mycenaean influence in the north-east corner of the Aegean. Its whole style of building is

Minoan, though the few houses of the city which were left to be discovered after Schliemann's wholesale uncovering of the Second City below are rather continental Mycenaean than Minoan in style, as we should expect. The walls are Minoan, and are among the great relics of Minoan or Aegean architecture. The knowledge of ashlar masonry was evidently brought there by the Mycenaeans. The great walls were built in the most solid way possible, with a batter decreasing in angle in two stages in the lower part, the top being

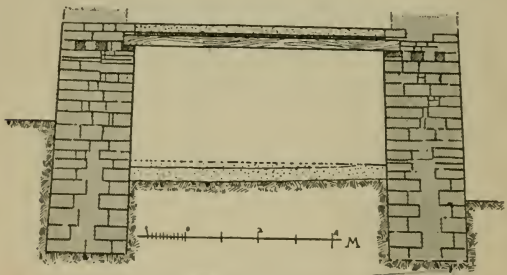


FIG. 48.—Troy; tower of the Sixth City (DÖRPFELD, *Troja u. Ilion*, Abb. 49).

vertical, and topped with a causeway-wall of brick, later replaced by stone. The contour of the 30-feet high wall, with its twice broken line, is compared by Dörpfeld to that of the Eiffel Tower.[1] It was strengthened by great hollow square towers, with wooden cross-floors within (Fig. 48), and by prow-like bastions, of which the North-East Tower is the finest specimen. The arrangements of the gates with their narrow passages commanded by two walls are like that at Tiryns; in one the passage-way is curved (Fig. 49).

These are no doubt typical Mycenaean town-walls of

[1] *Troja u. Ilion*, p. 149.

the later period, and had Knossos ever been properly fortified, similar walls would have been found there.

The people who could build palaces and walls in this fine fashion might well be conceived as using their

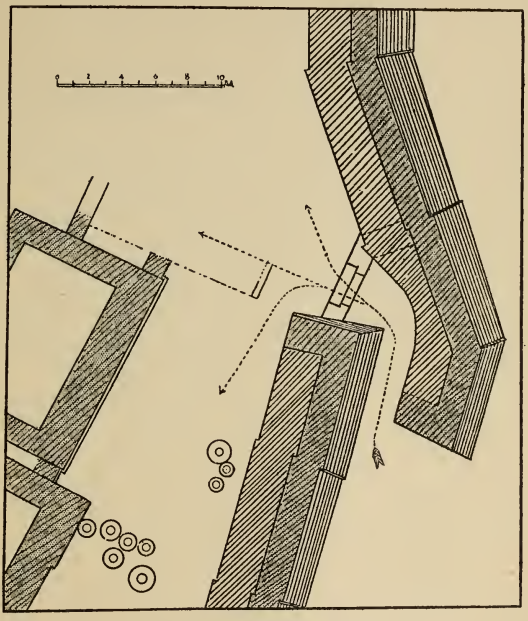


FIG. 49 —Troy; gate of the Sixth City (DÖRPFELD *Troja u. Ilion*, Abb. 40).

architectural knowledge for the making of such public works as aqueducts. In spite, however, of their knowledge of water-leading, as shown in the drains and conduits of Knossos, we know of no aqueduct built by the Minoans. Great engineering works were ascribed in

legend to the predecessors of the Greeks; the regulation of Lake Kopaïs by means of the Boeotian *katavothrai* was ascribed, no doubt rightly, to the Minyae, the Minoans who built Orchomenos;[1] but we hear of no aqueducts. If the Minoans were not predecessors of the Romans in this respect, however, they were in respect of roads. The light Egyptian chariots which, as we shall see, they used must have had good roads to run on, as they would be useless on the rough Cretan land or on such "roads" as now exist in the island. And we know that they did build good roads; a whole system of stone causeways running northward from Mycenae through the Pass of Dervenaki and over the Nemean hills to the Gulf of Corinth has been discovered,[2] which can only be ascribed to the Minoan conquerors of the Argolid, and doubtless gives us an idea of the roads which were built in Crete. These causeways instead of following the valleys go straight up and over the hills in a very Roman fashion, a method which has been followed in Crete to this day.

The chariots and horses are represented on the Knossian tablets, the Tirynthian frescoes, and Cyprian pots. In the summary lists or accounts on the Knossian tablets the horse is indicated simply by its head, but the chariot is sketched in its entirety, rudely enough, but sufficiently well for us to get a good idea of its appearance.[3] It seems to have been exactly like the Egyptian chariot, very light and open, with four-spoked wheels, handle-bars at the back, and a curved double yoke for the two horses, no doubt swivelled as in Egypt (Fig. 74; *cf.* Pl. XXX, 1). We can imagine a Minoan chariot as exactly the same as the well-known Egyptian chariot in the Museum at Florence, or that recently discovered in the Tomb of Yuia and Tuyu at Thebes, and now at Cairo, which is complete even to its

[1] The "Minyan" pottery (p. 88) was probably not really Minyan.
[2] Tsountas-Manatt, p. 35. [3] Evans, *Scripta Minoa*, p. 42, Fig. 19.

original solid tyres of leather.[1] Such a chariot, with its two fiery steeds, would travel along the stone-built Minoan roads[2] at great speed, a speed which the modern traveller in Crete, stumbling and shambling along the vile *βασίλικους δρόμους* of the island on slow-going mule or pony, may well envy. Both horse and chariot were probably introduced from Egypt at the beginning of the XVIIIth Dynasty.[3] Later on we find the chariot often represented on the Late Minoan pottery of Cyprus (Fig. 51), and in the island it was still used for war in early classical days, when in Greece proper it had long been relegated to the games. Its form, probably under the influence of Assyrian models, had now become clumsier, and its light build had given way to a heavier style of construction, with closed-in sides, able to go with greater safety over the rocky Greek country; the light Egyptian form, well adapted for Egyptian deserts, would be useless in Greece, in spite of its great width of gauge, except upon carefully built stone roads and causeways. Probably, therefore, in Minoan Greece the chariot was actually used rather for pleasure or quick transit than for war.

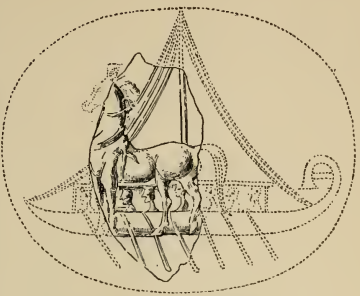


FIG. 50.—Horse on shipboard; a seal impression from Knossos: enlarged.

[1] DAVIS, *Tomb of Iouiya and Touiyou*, Pl. I, XXXII.

[2] See p. 142.

[3] The horse and chariot had themselves reached Egypt not long before; see *Anc. Hist. N.E.*, p. 213. On a Knossian seal impression we see a representation of a horse on shipboard (Fig. 50).

In speaking of Minoan houses and palaces we have said nothing of their furniture. No doubt because most of this was of wood, we have none of it left; a fact that makes a great contrast between Aegean and Egyptian archaeology. The Egyptian tombs have preserved for us so many specimens of furniture that we have a complete knowledge of what the house-furnisher and upholsterer could do in ancient Egypt. The famous "Throne of Minos" at Knossos may give us some idea of a Minoan wooden chair (Pl. XXVII, 2).

FIG. 51.—Procession with chariots. From a Cyprian Late Mycenaean vase.

It is of stone, but it is very obviously imitated from a wooden chair, and the style of its crocketed decoration is purely "wooden." Translated back into wood, as it often has been, it no doubt is an admirable replica of a piece of Minoan furniture.

Going back to the beginning of things: an odd piece of decoration in a primitive Neolithic dwelling was the vertebra of a whale, found at Phaistos in the Neolithic stratum. It had no doubt been cast up on the southern coast, and been treasured by the early inhabitants as a curiosity.[1]

[1] Mosso, *Dawn of Mediterranean Civilization*, p. 66.

CHAPTER VI.—TEMPLES AND TOMBS

ONE of the most characteristic features of early Aegean civilization is the fact that the "temple" does not distinguish itself clearly from the "palace." The great buildings we have just described were certainly palaces. Where then, and what, were the Temples? Elsewhere the temple has been the greatest of buildings, the gods' house, the chief and most splendid of all, built to defy time, the best and largest lasting of men's architectural handiwork. It was so in Babylonia and in Egypt; it was so in later Greece. In Assyria palace and temple were equal in importance; the Assyrians were a severely practical people. Among the Hittites, at Boghàz Kyöi, we see the foundations of a building that may be palace or temple. Most probably it was a palace; the temple was the neighbouring open-air shrine of Yasili Kayà. At Knossos and Phaistos we have obviously palaces; and all the other great Aegean buildings were palaces, not temples. In direct contradistinction to the Egyptians, then, the Minoans had no great temples at all. What then were the shrines of their religion? We know that they venerated sacred caves on the hillsides, and rocky gorges in which divinity was supposed to dwell. Were these their only fanes? Like the Hittites of Pteria, did the Knossians possess some sacred spot in the open air as their chief shrine?

Caves and gorges were used as places of worship, but it is probable that the great palace-buildings were themselves temples also. We certainly find small shrines within them for domestic worship. But more

than this, the royal palace was probably also the head-temple of the countryside. Sir Arthur Evans believes that the king was at the same time high-priest, that Minos was not only ruler of broad Knossos and of the seas, but also chief priest of Zeus-Poseidon the Bull and of Rhea, his mother and the Mother of All. Certainly all that we know of Minoan religion shows its unmistakable similarity to the characteristic cult of Anatolia, the religion of Kybele and Atys; the identity of Rhea and Kybele has always been obvious, and that the Minoans worshipped Rhea, as tradition would lead us to expect, is proved by archaeological evidence. It may therefore well be supposed that the Anatolian practice of identifying king and priest, the institution of the priest-king, was in vogue in Crete also. And the absence of great temples apart from the great palaces is in favour of this view; Minos of Knossos was a priest-king, his palaces were also temples. He and his court served the gods for the nation, and there was no need for a separate non-royal caste of priests with their temples; church and state were probably not separated as they were in Egypt, though, of course, we do not know that towards the end of the Minoan period the priest-kings may not have become much more priestly than kingly, with the result that non-royal chiefs, probably Northern Greeks, may have established themselves as entirely lay kings, relegating the old priest-rulers to the position of priests alone. Then temples, as distinct from palaces, first came into being. In the Sixth City at Troy Dörpfeld thought he could distinguish a temple from the royal palace. The "temple" was close to the precinct of the later fane of Athena, and it is not impossible that the Mycenaean building did eventually come to be used entirely for religious purposes, and so was the ancestor of the later sacred precinct. But that it was originally a temple and nothing else is doubtful, unless we consider that the northern "Mycenaeans" of the

Sixth City, who built their palaces in the northern *μέγαρον* style, had ideas of religion differing considerably from those of the Minoans, and differentiating clearly between "palace" and "temple," "king" and "priest." This is not impossible, as the Northern Greeks, from whom the "Homeric House" probably came, were probably of Indo-European race, and worshipped the more Aryan of the Greek gods, Zeus of Olympus, Hera, Apollo,[1] Ares and the rest.

In later Greek religion we can, as has often been remarked, differentiate to some extent between the Aryan and the pre-Aryan elements, the pre-Aryan being, of course, the Minoan. We can then dichotomize the Greek Zeus into the Aryan Zeus of Olympus and the non-Aryan Zeus of Crete, and distinguish the Father-God of the Thessalian Hellenes, who ruled amid the clouds of Olympus and launched his angry thunders and lightnings on the heads of men, from the young warrior "Velchanos" of the Cretans, who was suckled by Amalthea the goat in the cave of Dikté, and brought up by the Mother Rhea in Mount Ida. Velchanos was evidently the only Cretan male deity, and on the Anatolian analogy, he may have been conceived, like Atys, as both husband and son of the Mother-goddess. When the Cretans came to the North, Zeus was the god who corresponded best to their Velchanos; when the Achaians and Dorians came to Crete, Velchanos alone represented the male godhead, and could be identified with Zeus. The legend of the youth of Velchanos, and of the dance of the Kouretes round his cradle, was early appropriated to the Olympian Zeus. Otherwise he remained very Hellenic. In Crete, however, the god preserved most of his old Minoan idiosyncrasy, and all sorts of barbarous tales were told

[1] Apollo, however, though he seems Aryan enough, and probably is mainly so, yet in legend was connected with Crete, whence his worship is said to have come to Delphi. See p. 148, n. 4.

about him which the other Greeks would have nothing to do with. The Cretans, for instance, said that he had died, and pointed out the mountain, with its sacred cave, where his death had taken place ; Iuktas, near the modern Arkhánais, south of Knossos, Iuktas, with its cone-shaped ridge-end, which dominates the old centre of Cretan activity, and must have been sacred from the beginning of things.[1] But to the Northern Greeks this tale of Zeus having died was an absurdity. Hellenic gods did not die. To the man of the Mediterranean and of Asia the idea of a god dying was not so impossible: Tammuz died; Osiris was a dead god ruling the kingdom of the dead ; Velchanos could die, as he was born, in a mountain-cave.

Apollo, the twin of Zeus at Miletus,[2] has in him something of the old Velchanos. Traditionally, the worship of the god and his oracle came to Delphi from Crete.[3] I have supposed (*Oldest Civilization of Greece*, pp. 243, 297) that this Cretan worship came to Delphi and to Delos (and also to Miletus?) at the close of the Mycenaean age, but Sir Arthur Evans has lately found archaeological reasons (communicated to the Society of Antiquaries in 1913) for believing that the connexion is much older. There is no doubt that Delphi, with its deep chasm-like valley, and its gloomy little gorge behind Castalia's spring and between the frowning Phaidriades, the " shining rocks," is precisely the place that Cretan religious influence would select for the foundation of a shrine.[4] The scenery of Delphi

[1] Trevor-Battye, *Camping in Crete*, p. 184, notes that seen at a certain angle (from N.N.W.), the north side of the northern end of the hill looks very like a great male head in repose ; the features are very clear. This face on the mountain may have had something to do with the legend.

[2] Curtius, *Die Ionier*, p. 33, notes the Cretan name of Miletus.

[3] Hymn. Hom. I ; Curtius, *Die Ionier*, p. 32.

[4] Miss Mary Hamilton Swindler has lately collected in the Bryn Mawr College Monograph Series, XIII, the evidence as to the *Cretan*

is very Cretan in character, and the gorge is very like a smaller edition of the great chasm of Arvi, the seat of the worship of Zeus Arbios, or even the huge Monasteráki Gorge or "Cleft of Kavousi," as it is sometimes called (p. 37), where no doubt some Minoan Zeus-Apollo received in the older days a worship which had either died out or become reduced to insignificant proportions in classical times. Oracles were usually associated with such clefts and gorges, and no doubt there were many in prehistoric Crete. As a religious institution, the oracle probably belonged entirely to the old non-Aryan races; we find similar institutions in vogue among the probably related Hittites of Anatolia, and also in Egypt and Palestine.[1]

In Crete the tradition of the old Mediterranean gods survived more completely than anywhere else in the Aegean area. In Greece proper we find a Poseidon,[2] an Athena, and an Artemis who surely belong to the older religion, and many nymphs and dryads, satyrs and fauns, spirits of the wood and forest, and such therio-

Elements in the Cults and Ritual of Apollo. She comes to the conclusion, which is extremely probable, that the original oracular shrine of Pytho at Delphi was of Cretan origin, and was later appropriated by the invading Aryan worship of Apollo. The legends connecting Apollo with Crete are thus accounted for. (He would naturally be confused with the Cretan god who was in Crete identified with Zeus; when he came with the Dorians to Crete he was there naturally identified with a form of the Cretan deity.)

[1] We know of the existence of Hittite oracles from the Boghàz Kyöi tablets (*Anc. Hist. N.E.*, p. 257); and the Egyptian oracle of Khensu-the-Planmaker-in-Thebes is well described in the story of the "Possessed Princess of Bekhtan" (*ibid.*, p. 372). The Biblical oracles are well known.

[2] In my *Oldest Civilization of Greece*, p. 298, I had already suggested that Poseidon was a prae-Hellenic (Mycenaean) deity, and now Miss Jane Harrison has, in an elaborate paper read before the Hellenic Society on February 10, 1914, given proofs of this. Poseidon was no doubt another form of the Aegean god who was in his terrestrial aspect identified with the Aryan Zeus.

morphic deities as the horse-headed Demeter of Phigaleia, who also seem pre-Hellenic.[1] But they all have Hellenized names. In Crete they kept their old names: Velchanos for Zeus, Diktynna or Britomartis for Artemis or Athena, and so on. And Rhea was always regarded as the great goddess of Crete. The old traditions were strong in Crete, and archaeology has shewn us something of what the Minoan religion, of which they preserved a trace, was in its heyday.

The origin of the goddess Aphrodite has long been taken for granted. It has been regarded as a settled fact that she was Semitic, and came to Greece from Phoenicia or Cyprus. But the new discoveries have thrown this, like other received ideas, into the melting-pot, for the Minoans undoubtedly worshipped an Aphrodite. We see her, naked and with her doves, on gold plaques from one of the Mycenaean shaft-graves,[2] which must be as old as the First Late Minoan period (*c.* 1600–1500 B.C.), and—not rising from the foam, but sailing over it—in a boat, naked, on the lost gold ring from Mochlos (Fig. 4, 2).[3] It is evident now that she was not only a Canaanitish-Syrian goddess, but was common to all the peoples of the Levant. She is Aphrodite-Paphia in Cyprus, Ashtaroth-Astarte in Canaan, Atargatis in Syria, Derketo in Philistia, Hathor in Egypt; what the Minoans called her we do not know, unless she is Britomartis. She must take her place by the side of Rhea-Diktynna in the Minoan pantheon.

No doubt she may have been regarded as another form of the Great Goddess, so that Mr. Hogarth's view that Aegean religion was a "Double Monotheism," a monotheistic-ditheistic worship of the Goddess and her

[1] On theriomorphism and theriolatry in Greece see A. B. Cook, *J.H.S.*, XIV, p. 80 *ff.* See further below, p. 157.

[2] Schuchhardt, *Schliemann*, Figs. 180, 181.

[3] See p. 69.

Son-Husband, Rhea and Zeus,[1] may be justified. But the different forms of Rhea would surely be popularly regarded as distinct goddesses.

On the seal-stones and rings we see the goddess Rhea alone, or with her handmaidens, or other forms of herself (Diktynna, Britomartis, etc.), dressed like an earthly queen. The faience figures from Knossos show us a form or forms of her associated with snakes and cats. On the ring from Mochlos she is in a boat. On the Mycenae rings, on the Mycenae fresco, and on a *larnax* or coffin from Milatos (on the north coast of Crete), we see the associated god, Zeus-Velchanos. He is represented as an armed youth, with spear and shield, descending from the heavens to earth (Fig. 52). On a ring from Mycenae[2] his descent from the sky is shewn by his figure being made small, and among sun, moon, and stars his long hair blows upwards, shewing descending movement. On the *larnax* we see him again, with enormous shield, and his hair streaming outwards and upwards as he swiftly descends to earth.[3] He is the young Zeus of Crete, the warrior whom the warrior Kouretes sang to sleep with the clash of spear and shield, as the Salii of Rome danced also; and he may have contributed to the later Greek conception of far-darting Apollo. On an electrum ring from Mycenae we see the young god standing armed before the great goddess, who sits on a throne beneath the shade of a tree. Sacred trees and stones (*baetyli*) were specially

FIG. 52.—The Minoan god Velchanos (= Zeus - Poseidon?); *larnax* from Milatos (L.M.III). *Scale* $\frac{1}{10}$.

[1] Art. "Aegean Religion," Hastings's *Encyclopaedia of Religion and Ethics*, I, p. 143 *ff.*

[2] SCHUCHHARDT, Fig. 281.

[3] Fig. 52, EVANS, *Prehistoric Tombs*, Fig. 107, p. 99.

associated with these deities, as Sir Arthur Evans pointed out twelve years ago. And we are at once reminded of similar characteristics in Semitic religion, which prove that in Palestine at any rate there was a Mediterranean pre-Semitic element in the population which profoundly modified the Canaanitish religion. The holy tree is omnipresent in the Cretan religious scenes, and it usually seems to be an olive (see Pl. XV, 2). In the sacred groves were performed the religious dances in honour of the deities, which are also represented on the rings and seals, usually with a background of trees. One dance probably resembled the modern χορὸς, with its trailing line of women, hand-in-hand, led by a man who leaps fantastically into the air as he conducts the dance (Fig. 53). But probably also it was more ecstatic in character; and in honour of the god alone Pyrrhic dances of warriors, and dances like those of the Kouretes and Salii, were no doubt performed.

FIG. 53. — Religious dance (χορὸς); bezel of a gold ring, Mycenae. *Enlarged.*

Intimately associated with the deities was the great national sacred emblem, the "Double Axe," which appears everywhere, as a hieroglyph or sacred sign, represented as an object of worship on the horned altar, and in bronze either full-size or in miniature, as a votive offering (Fig. 54). Since the Double Axe, the λάβρυς, was the special emblem of the Carian Zeus at Labraunda, it would appear that this national weapon was (as would naturally be expected) the emblem of the god rather than of the goddess. The Knossian Palace was probably one of the chief seats of the worship of the god, and as such obtained its traditional name of λαβύρινθος, the Labyrinth, "the Place of the Double Axe."

The legend of the Minotaur is known to all. Here at Knossos is his labyrinth. And the bull was in Crete associated with the Double Axe, his emblem. The *labrys* constantly appears between the horns of the bucranium, evidently itself a sacred object and one of the emblems of the god. The bull's head is found in pottery as a votive object (forming a vase),[1] and great heads of the holy animal were made by the goldsmiths; the silver one from Mycenae with the golden rosette on its forehead is well known.[2] It is probable that the sport of bull-leaping (*ταυροκαθάψια*), so beloved of the

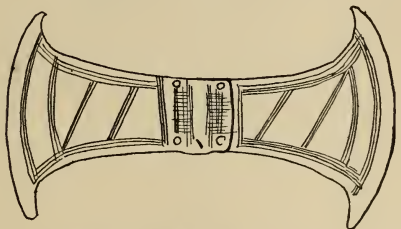


FIG. 54.—Votive Double Axe; bronze. From the Dictaean Cave, Crete. *Candia Museum. Scale* ½.

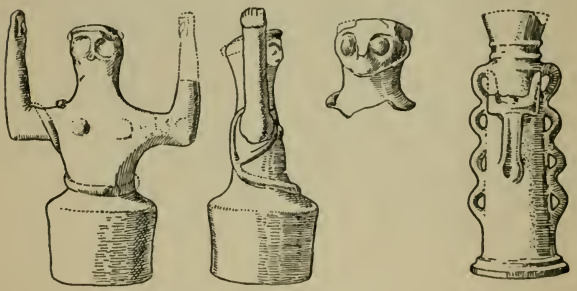
Minoans and Mycenaeans, was connected with the worship of the god (p. 176).

One may wonder whether the horns of the sacred beast had anything to do with the shape of the Minoan "horns of consecration" or horned "altar" which we see so often represented with the double axe or the sacred pillar. To call this peculiar object an "altar" is in reality erroneous, as we have actual specimens of it in rough pottery, which shew us that it was not an altar of any kind, but simply a ritual object, shaped like the horns of an ox, which was used in religious exercises. Its presence in a representation of any kind decisively marks the religious character of the scene (as on the

[1] *Gourniá*, Pl. I. [2] SCHUCHHARDT, *Schliemann*, Fig. 248.

steatite fragment, Pl. XV, 2); and the presence of the actual object decisively indicates a shrine.

A small shrine of this kind, dating from the period of partial reoccupation in the Third Late Minoan period, was found in the Knossian Palace.[1] On a ledge of earth about a foot high from the floor, were the rude clay "horns of consecration," with two or three primitive-looking divine images, also of pottery. The lower part of each figure was a cylindrical box, out of which rose



1 2 3

FIG. 55.—Pottery household deities (1, 2), and trumpet (3) from Gourniá. *Candia Museum. Scale* ⅛.

the rudely modelled female form with arms raised. On the ground before the image-shelf were one or two rough bowls and incense-burners. The whole cult apparatus was of the crudest character, and does not say much for the religious art of its period. But the Minoans seem not to have troubled much about the artistic excellence of their common divine images,[2] which were evidently used simply in household shrines like this. The "owl-headed" clay figures of

[1] EVANS, *B.S.A. Ann.*, VIII, p. 96 *ff.*

[2] They even venerated natural stone concretions which resembled images, as many of these have been found at Knossos (*B.S.A. Ann.*, XI, Fig. 4, p. 10).

goddesses from Mycenae, with their summary ἄγαλμα-like treatment of the lower part of the body, show this. And in the older shrine discovered by Miss Boyd at Gourniá we do not see any finer work (Fig. 55). Only the snake-goddesses (Pl. I), which were probably the furniture of a royal household shrine of the Middle Minoan period, show the best Minoan art applied to household religious purposes.

The snakes of the snake-goddesses may have had something to do with the household cult, like the household snakes at Rome. And in these shrines we certainly seem to have something analogous to the Roman worship of the Lares and Penates. At Gourniá the most important furniture of the house shrine consisted of great imitation trumpets of clay, round which serpents twist their sinuous bodies (Fig. 55, 3). The trumpet was evidently a regular accompaniment of Minoan religious worship, and the conch-shell was used as a trumpet; on an *intaglio* we see one being used, and a big stone one was found at Knossos which, however, can hardly have served the purpose of an instrument. A sacred object of which we do not know the exact significance is the "sacral knot," which is seen in the hands of the seated male figure on the Melian fresco.[1] Two similar knots in stone have been found at Knossos[2] and at Mycenae (in a shaft-grave)[3] respectively. They represent a sort of towel or kerchief knotted and with the ends hanging down (Fig. 56), and are paralleled by an object sometimes held by Egyptian figures.[4]

FIG. 56.—Sacral knot; ivory. From Knossos. *Candia Museum. Scale* ½.

[1] *Phylakopi*, Fig. 61. [2] *B.S.A. Ann.*, IX, Fig. 4 (p. 6); of ivory.
[3] SCHUCHHARDT, *Schliemann*, Fig. 253 (of alabaster).
[4] HALL, *Hieroglyphic Texts*, Pt. V, Pl. 32 (B.M. 708).

The small household shrines are the only thing resembling a special religious building that we can find in Aegean archaeology. And these are only small chambers in houses or palaces. It is possible that the worship of the gods on a great scale was only carried out in the open air, or the palace-court, or in a grave or cave not far distant. Certainly the sacred places to which pilgrimage was made, and at which votive offerings were presented, were such groves, rocky gorges, and caves. The Gorge of Arvi, on the south coast of Crete, was evidently a very sacred place of the god, as is shown by the fact of its having been in later times the seat of a special worship of Zeus, as "Jupiter Arbius." The sacredness of caves, quite evident from the legends, has been abundantly confirmed by the archaeological discoveries of Minoan offerings at the Dictaean Cave on Mount Lasithi and the Kamárais Cave on the southern slope of Ida, and of early Hellenic objects of the same kind in the Idaean Cave on the Nida Plain, below the summit of the great mountain of Zeus. In the stalagmites and stalactites of the Dictaean Cave had been preserved hundreds of little proofs of ancient Cretan piety; small double axes being the commonest of all (Fig. 54), and actual arms being often found, fit tribute to the young warrior-god whose birthplace that cave was fabled to have been (see p. 147). But these holy places were distant from the centres of civilization, and no doubt worship on the great scale was carried on in the palace-courts, which would thus correspond to the courts of an Egyptian temple. It may be, of course, that this kind of general worship and official ritual was not so usual in Minoan Greece as in Egypt or Assyria. Cave-pilgrimage and household-worship are the only forms of λειτουργία of which we have definite and certain proof.

Whether the household deities were in any way distinct from the Great Mother and her Son we do not

know. The groves and rocky gorges of the land were no doubt peopled not only by forms of the Great Gods, but also by crowds of spirits of mountain, wood, and stream, the ancestors of the nymphs and dryads of classical Greece. We have no doubt representations of the water-demons in the extraordinary animal-headed creatures bearing water-jars (Pl. XVIII; Fig. 57),[1] which are so common in Late Minoan and Mycenaean art. Their character as demons of the streams and springs is certain enough, but we have no clue whatever to the true origin of their extraordinary form, which most resembles that of the Egyptian hippopotamus-goddess Taueret (Thoueris). Is it a form, connected with water in their minds, that goes back to the beginning of things, when the original Aegeans (as is very probable) first came from the Nile-Delta to Greece?[2]

FIG. 57.—Water-demons with vases and sacred tree. From an intaglio seal; Vaphio. *Scale* 2 : 1.

We find a hunting-goddess, an Artemis *πότνια θήρων* who is human in shape, but most of the minor deities, if we can call them deities, were conceived as beings of extraordinary form. We have probably a selection of demons in the famous clay-impressions from Zakro (Fig. 88), which show us butterfly-winged sphinxes, stag-headed women, antlered male forms reminiscent of Herne the Hunter, and other strange beings which seem to have come out of the sketch-book of Hieronymus Borch (see pp. 208, 209).

Aegean religion was weird indeed, much weirder in

[1] The first illustration represents the rim of a bronze vessel lately found in Cyprus, and published by Mr. MARKIDES in *B.S.A. Ann.*, 1912–1913, p. 95 *ff.*, Pl. VIII, and a similar rim in the Metropolitan Museum of New York.

[2] *J.E.A.*, I, p. 112. *Cf.* the horse-headed Demeter (p. 150).

some ways than even the much-vaunted mysteries of Egypt. Our knowledge of Minoan religion is, however, very small and every new discovery is eagerly scanned, to see if it will give us more information on this engrossing subject. It is on the funeral side of religion that we have least information, and until the discovery of the famous Hagia Triada sarcophagus we knew practically nothing but what could be guessed from the method of burial and the nature of objects found in the tombs. The paintings on the Hagia Triada sarcophagus have given us for the first time some idea of the funeral rites.

The tomb was the house of the dead, and so, as elsewhere from the very earliest times, the last homes of the great dead were first caves, since men also dwelt in caves, and then in artificial caves, rock-cut tombs, when it was possible to make them. But the common herd were simply buried in the ground in graves, very often in a big pot. The two methods of inhumation—tomb and grave—of course, very soon became confused and combined. For instance, the tomb-chamber was placed at the bottom of a grave, and so on. We see this also in Egypt. The conditions of the locality, of course, influenced the manner of making the grave. Here it would be possible to cut tombs in the rock horizontally, there only vertically, so that the horizontal *dromos* of approach to the cave would be converted into a vertical pit, which was, to all intents and purposes, a deep grave, and was covered up as such. In other places the nature of the rock would forbid much tunnelling or pit-making, and there artificial caves would be made of stone blocks, forming cist-tombs, covered up with earth like an ordinary pit-grave. The convenient presence of naturally separated blocks of stone might also lead to this development. In Greece this covered cist-house eventually developed by confusion with the cave-tomb itself into a regular architectural

erection, the *tholos* or circular-domed tomb, which was covered with earth, yet retained the *dromos* (descended from the approach that led to the primeval cave burying-place), in order that offerings might be brought to the dead. Here was a combination of the cave-descended cist and the cave-descended rock-tomb. And in the *tholos* itself the dead were actually buried either in a side-chamber (cave-tomb), or in a pit (grave). In early Minoan times great *tholoi* were built to contain a large number of bodies. These were evidently communal tombs, direct descendants of the common burial-caves in which primeval man deposited the remains of whole families and tribes together. Such tombs would begin to be made in a plain-country at some distance from mountains and caves. With isolated graves the idea of the common burial-place was carried out in the cemetery, the town of the dead.

The *tholos* is probably the representative prehistoric Greek tomb in the minds of most. But the Minoans made their tombs of all the other kinds mentioned above. And what is curious is that, whereas in other lands, such as Egypt, certain types of tombs are characteristic of certain periods only, with the exception of the cist-grave, which was purely primitive, *tholoi*, rock-chambers, pit- and shaft-tombs, plain graves, house-tombs and pot-burials were all used together by the Aegeans at all periods. We cannot therefore judge the age of any Aegean tomb except a cist-grave but by the nature of the objects found in it. The diversity of the Minoan tombs gives the lie to the idea that difference of tomb necessarily means either difference of period or difference of race. So far as period is concerned, in Egypt we find simply that people were swayed more by convention, and were more conservative than in Greece; they preferred monotony to variety; the Greeks, even then, the reverse. And so far as race is concerned, the form of the tomb originally depended on local

conditions, and the same race would easily evolve different types.

In Greece, as in Egypt and in the rest of the world, the dead were, in the earliest ages, buried in the characteristic primitive position, with the knees drawn up to the breast. This almost universal custom was followed without variety in Greece, as elsewhere. It is always found at the epoch of the cist-graves. This position of the dead is therefore conclusive as to early date, though in continental Greece the custom apparently lasted longer than in Crete and the Aegean.

The oldest type of Greek civilized burial is therefore that of the crouched body in the cist-grave, which we find typically represented in the Cyclades, or the cemeteries of Amorgos, or of Chalandrianè in Syra, and elsewhere. The cists were usually formed of six slabs of marble, in which the body was placed with the pots and stone objects already described (pp. 24, 48, 71). Primitive *Hockergräber* (crouched burials) have also been found at Tiryns. In Crete we find a primitive type of interment in rock-shelter burials, the interment being simply protected by a rough wall built up against a rock.[1] Later we find cist-graves and chamber-tombs in Eastern Crete, while in the Messará *tholoi* were usual. "No *tholos* of the Messará type has been found in Eastern Crete, nor do the cist-graves and chamber-tombs of Eastern Crete appear in the Messará. There is no reason to suppose that this indicates any difference in race between the inhabitants of the two parts of the island, as the objects associated with both types of burial can belong only to one race and culture, so similar are they in all their main aspects. The *tholos* never appears in Eastern Crete until the L.M.III period, and then must be regarded as a type borrowed from the Greek mainland rather than the survival of

[1] Miss E. H. Hall, *Sphoungarà* (Univ. Penn. Free Museum, *Anthrop. Publ.*, 1912).

the early *tholoi* of the Messará." The chief early *tholoi* of the Messará are the great communal ossuary at Hagia Triada already mentioned, and similar graves at Koumása and Porti, in which M. Xanthoudides has found many interesting remains of the beginnings of Cretan civilization.

The cist-graves and chamber-tombs of the east of the island are found best represented at Mochlos. The cemetery was situated on the steep declivity of the peninsula (now an island) on which the town stood, and this position has naturally caused them to suffer severely from denudation. I take the following summary description of their types from Mr. Seager's publication: [1]

"1. The first and most important were the ossuaries or chamber-tombs, which date without exception from the E.M.II and E.M.III periods. These were of large size, and were entered through doorways closed by huge upright slabs of stone.

"2. The tombs of the second type, which resemble the Cycladic cist-graves, had their walls formed of upright slabs of stone. Tombs of this sort are always Early Minoan. In many cases they continued in use during the M.M. Age, but they are never of M.M. construction.

"3. Associated with the cist-graves was a third type of tomb which was not only popular with the Early Minoans but was employed throughout the Middle Minoan period. In this class the walls of the tomb were built of small stones and were quite similar to those found in house construction. In several cases Early Minoan tombs showed a combination of this type with the preceding one, and had walls partly formed of upright slabs and partly built of small stones.

[1] *Mochlos*, pp. 13, 14.

"4. Fourthly there were a few examples of burials in holes in the rocks with no walls of any sort. These usually dated from the E.M. period, and contained but a few objects, and those of poor quality. A small cave which was cleared yielded a great mass of bones and two clay vessels of E.M.II date.

"5. Lastly, in the M.M.III and L.M.I epochs, a new type of burial made its appearance. In these periods the bodies were placed in large terra-cotta jars, or *pithoi*, several of which were found standing upside-down in the surface soil over the earlier tombs."

No system of orientation was followed in building these tombs, and they lay in whichever direction best suited the slope of the hill on which they were placed.

The chamber-tombs with the monolithic doors are extremely interesting. The walls were very like those of houses; they were probably roofed with wood and covered with earth. We have already seen what treasures in the way of funeral furniture they yielded to their discoverer.

No inner receptacle within the tomb for the body seems to have been devised till the Middle Minoan period, when the pottery *larnax* or coffin-chest first came into use, perhaps as a much-modified imitation of the Egyptian custom. The typical Cretan *larnax* had a high gabled lid, and was supported on four feet (Fig. 52). The later type is rectangular, but the oldest known is oval. Its lid is destroyed. The Middle Minoan grave at Stavroménos near Candia, in which it was found, was a simple example of the most ordinary burial of this period. At Isopata, near Knossos, has been found a royal burying-place;[1] a great stone tomb comparable to the *tholoi* of Mycenae and Orchomenos

[1] Evans, *Prehistoric Tombs*, p. 136 *ff.*

(Fig. 58). Unfortunately it was ruined, the greater part of the upper masonry having been carried off for building purposes in modern times. The original interment, too, had been disturbed at an early period, and successive intruded burials had brought about a confusion among the ancient remains discovered, which, however, thanks to our knowledge of the distinctive styles of pottery and stonework in vogue at different periods, was not wholly inextricable. The style of the oldest objects, as well as that of the tomb itself, places its building definitely in the Third Middle Minoan period. It was approached by a descending *dromos*, like the mainland *tholoi*, twenty-four metres in length, two metres broad, and cut five metres deep in the rock. The tomb itself covers a space of about fifteen metres by nine. The inner measurements of the rectangular tomb-chamber are 7.85 metres by 6.07. It is approached from the *dromos* by a fore hall, measuring 6.75 metres in length. This consists of a passage with two

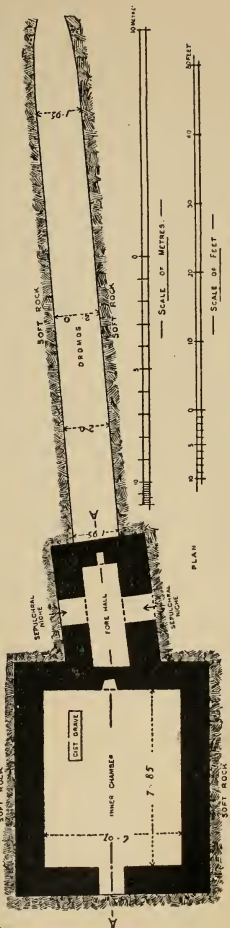


FIG. 58.—Plan of royal tomb at Isopata, Crete.

deep niches on either side. The whole is well built of courses of limestone blocks, long in proportion to their depth. The entrances are in the form of a truncated false arch, the walls going up straight to a certain height and then sloping inwards till within a few feet of each other, when blocks placed across formed the architrave (Pl. VI, 1). There is little doubt that the walls of the chamber were built and roofed in the same flat-arch form. The tomb was therefore a combination of chamber-tomb and *tholos*, having the square form of the one and an approach to the vaulted roof of the other. It may in some ways be regarded as a primitive form of the great *tholoi* of the mainland.

In these, the first of which probably date from the end of the Early Mycenaean period (L.M.I–III), we reach the zenith of Aegean tomb-architecture. The method of their construction is well known, and is thus described by Tsountas and Manatt:

"A circular shaft is sunk vertically from the rock surface (just as in making a lime-kiln nowadays). . . . In this cavity the *tholos* is built up in circle upon circle of regular ashlar masonry, each course overlapping the one below it, so as to form a continuous inward curve until the apex can be closed by a single block. As the walls rise they are 'covered externally with small stone bedded in clay mortar, and, when finished, so completely piled over with earth that they appear outside like simple barrow-graves.'"

The *dromos* is usually horizontal, and its sides are revetted with ashlar masonry.

Of the "Treasury of Atreus" (Fig. 59) the *dromos* is 20 feet wide and 115 feet long, "and its vertical sides, rising with the slope of the ridge, are at the end some 45 feet high. One block of the revetment is 20 feet long by 4 wide. The door is 17 feet 9 inches high, and it is

narrower at the top (8 feet 1 inch) than at the bottom (8 feet 9 inches) somewhat in Egyptian fashion. The lintel is composed of two enormous blocks, the inner one measuring 29 feet 6 inches in length by 16 feet 6 inches in breadth, and 3 feet 4 inches in thickness, with an estimated weight of 120 tons." The inner side of the inner lintel-stone is cut in a curve, to fit the curved line of the chamber (*cf.* Pl. VI, 2).

On either side of the door is a square pedestal of variegated marble, still *in situ*. On each of these pedestals stood a great half-column, acting as a pilaster, 45 feet in height, which framed the huge façade. Most

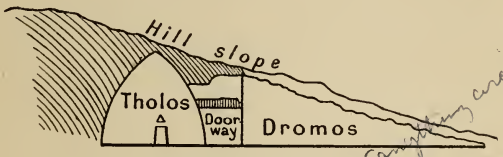


FIG. 59.—Longitudinal section of a *tholos*-tomb (Treasury of Atreus).

of the fragments of these two columns are, as has already been related (p. 15), now in the British Museum, where they have been reconstructed. They are of a loose dark-grey alabaster, and are decorated with a carved design of alternate zigzags and spirals (Pl. V).

Over the great lintel of the door the construction of the façade was lightened here and in the other great *tholoi* by a triangular relieving space which was masked by a light screen of sculptured slabs—in this case of red porphyry—with spiral ornaments in relief. One of these slabs is in the British Museum (seen in Pl. V).

There were great bronze doors, of which the pivot-holes still remain; and many nails of bronze still survive, which no doubt served to secure ornaments of metal.

The *tholos*-chamber itself is 48 feet in diameter and 48 feet in height. It is formed of thirty-three courses of large hewn blocks, perfectly joined—each course a perfect circle, and all gradually converging in a smooth curve to the apex, where the dome is capped with a single stone. The interior was decorated with rows of bronze rosettes, affixed by nails.

There is a small rock-hewn side-chamber, no doubt the actual tomb. As the "Treasury" was open even in classical times, all traces of the actual burial disappeared ages ago.

Next to the "Treasury of Atreus" in grandeur comes the "Treasury of Minyas" at Orchomenos (p. 16). It is unhappily ruined, but possesses in the sculptured ceiling of its side-chamber, with its spirals, lilies, and rosettes, an unique beauty that the larger tomb has not. This side-chamber is not rock-hewn, but built. The great chamber is but little smaller than that of the "Treasury of Atreus," being 46 feet in diameter. The lintel of the door is even finer than that of the Mycenaean *tholos*, as it is a single block (Pl. VI, 2).

The "Tomb of Klytaimnestra" at Mycenae is also ruined. It has a *dromos* larger than that of the "Treasury of Atreus," but revetted with smaller stones. The doorway is somewhat larger, being 18 feet high; its lintel is formed of three slabs of "leek-green" marble; in the centre slab are the pivot-holes for folding-doors, which opened inwards. Over the lintel is a moulding composed of two slabs of grey-blue marble; on one is a row of disks in low relief, evidently representing the beam-ends of a wooden roof-frame (as in the relief above the Lion Gate), and on the other are spirals. The triangular relieving-space was closed in the same way as that in the "Treasury of Atreus."

This tomb has no side-chamber; but in the centre of the great chamber is a pit which in later times, when the tomb was probably used as a sort of small temple,

was turned into an aqueduct, with a conduit underground leading to the outer end of the *dromos*, in order to carry away the water which no doubt trickled from the rock into the tomb.

It has already been said that offerings to the dead were placed in the *dromoi* of the *tholos*-tombs. In the *dromos* of "Klytaimnestra's Tomb" the excavator found much votive pottery of the Latest Mycenaean period. This, however, says nothing as to the date of the tomb itself, which must be much older. It is often assumed that this tomb is later than the "Treasury of Atreus," on account of its less imposing style and smaller stones. I am, however, inclined to regard it as being in reality earlier, and coming at the lower end of the transition from the Royal Tomb at Isopata to the "Treasury of Atreus."

Another Mycenaean *tholos*, also ruined, but hardly smaller than the "Treasury of Atreus," has splendid lintels and lower wall-courses of breccia. But in spite of this splendid stone, the building of some of these *tholoi* is really not so good as that of the Cretan royal tomb; at Orchomenos the building is of rubble with ashlar dressings, not of real masonry courses throughout.

Most of the numberless small *tholoi* scattered over Greece are later in date, being definitely Late Mycenaean (L.M.III). The shaft-graves at Mycenae are earlier, though probably not much earlier. They are the classical examples of this kind of tomb, the characteristic distinction of which is that it has no separate chamber proper, the lower portion of the shaft being simply excavated to a smaller diameter, and, when covered by a roof of slabs resting on the ledge thus made, forming the receptacle of the body (Fig. 60). At Mycenae the smaller "chamber" was formed by an artificial walling, and the slabs themselves rested on wooden beams shod with bronze. The bodies seem to have been placed in wooden coffins, decorated with gold *appliqué*

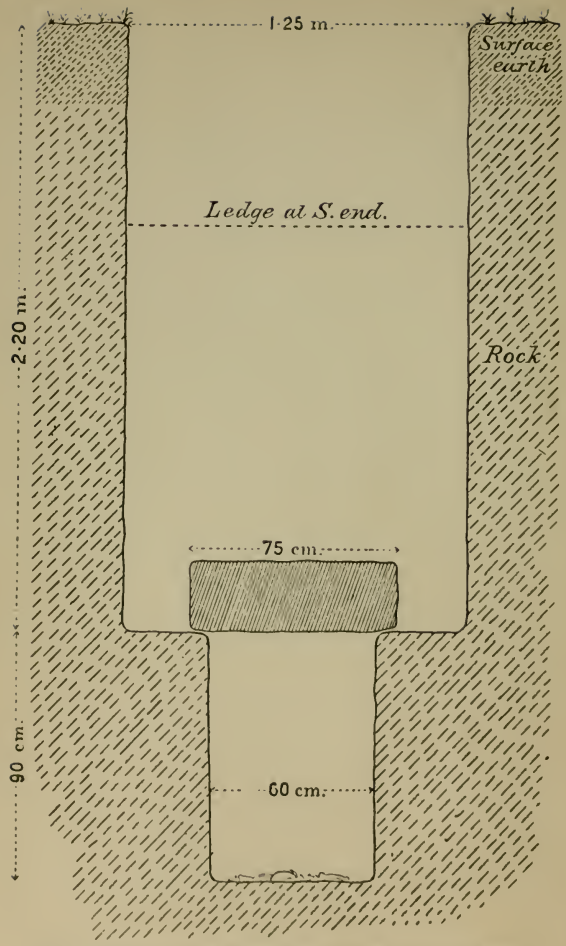


FIG. 60.—Section of shaft-grave; Zafer Papoura, Crete (L.M.III).

ornaments.[1] The splendid funeral state with which they were buried we already know.[2]

In the Cretan necropolis of Zafer Papoura, near Knossos,[3] we find shaft-graves of the Third Late Minoan period (Fig. 60). "The depth of the shaft proper . . . when the surface was not denuded, ranged from about 2 metres to $3\frac{1}{2}$ metres. The sepulchral cells went down about a metre below this depth, and were made just large enough to contain the extended body." The roof-slabs of the cell were sometimes well squared and sometimes rough. In one grave a certain number of the objects buried with the dead were placed above the slabs, owing to there being no room for them in the cell below. In one case also there was no cell at all, its place being taken by a simple pottery *larnax* beneath the slabs.

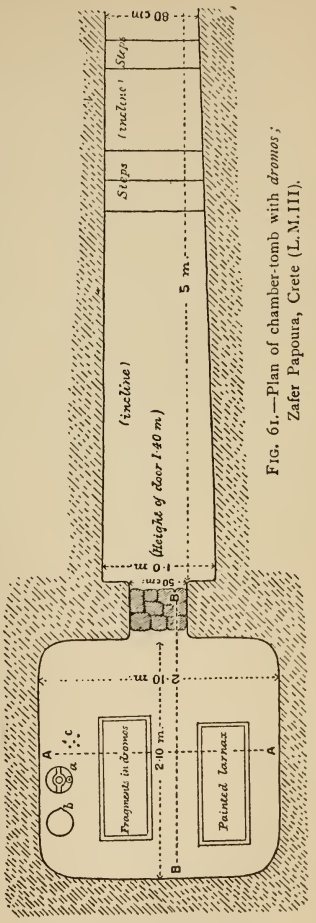


Fig. 61.—Plan of chamber-tomb with *dromos*; Zafer Papoura, Crete (L.M.III).

[1] P. 240. [2] P. 11 *ff.*

[3] Evans, *Prehistoric Tombs*, p. 1 *ff.*

The chamber-tombs (Fig. 61) of Zafer Papoura, approached by a *dromos*, were usually roughly rectangular, though round, horseshoe-shaped, and oval chambers are also known elsewhere in Crete. The roofs were usually domed, shewing how the built *tholos* was but a modification of the chamber-tomb, which itself was but an artificial cave. Inside it was the *larnax*, containing the body often in a crouched position, sometimes on the back with the legs drawn up sufficiently for it to be introduced into the coffin. The door was blocked with stones.

At Zafer Papoura another type of tomb is found, which Sir Arthur Evans called the "Pit-Cave." It is a combination of shaft-grave and chamber-tomb, having a small chamber—just long enough to contain an extended skeleton—approached by a vertical pit (Fig. 62). It thus closely resembles a well-known type of Egyptian tomb, though the chamber is much smaller. It is a chamber-tomb with the *dromos* turned into a vertical pit and the chamber reduced to the size of a mere cell. A typical pit is 4.35 metres deep by 1.39 metres broad, and the cell or cave measures but 1.10 metres in height by 65 centimetres in width.[1]

All these types of tombs are found together at Zafer Papoura, and the same phenomenon is seen elsewhere in Crete, as at Sphoungaràs, near Gourniá, where, in addition, there are crowds of simple *pithos*-burials, the body being crammed into the pot, which was turned upside-down and buried.[2]

Three years ago, Sir Arthur Evans excavated some more very interesting tombs at Isopata, of the First Late Minoan period. These have not yet been published, but one may say what their discoverer has already

[1] *Prehistoric Tombs*, p. 18, Fig. 11c.

[2] Miss E. H. Hall, *Sphoungarás* (Univ. Penn. Free Museum, *Anthrop. Publ.*, 1912).

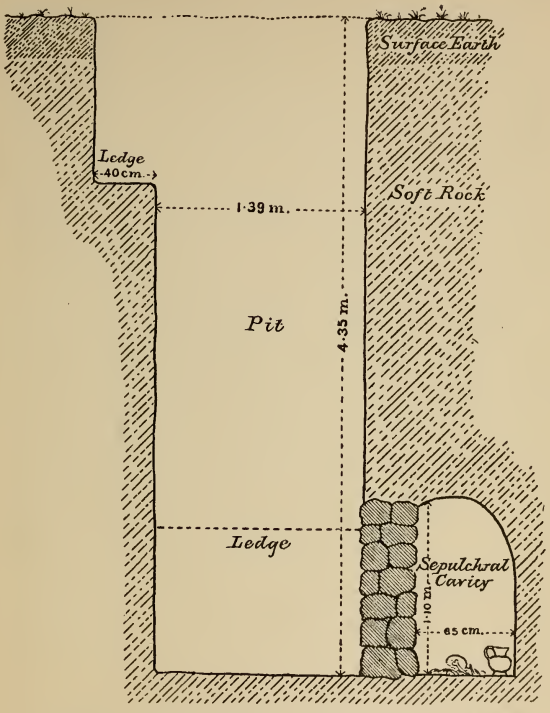


FIG. 62.—Transverse section of pit-cave; Zafer Papoura, Crete (L.M.III).

told us,[1] that their most remarkable feature is the arrangement in one of them of seats for the visits of the friends of the deceased to the tomb, a provision which

[1] In *The Times*, Sept. 16, 1910. An interesting discovery was that of pottery, evidently intended for temporary use, and painted in unfixed colours (an anticipation, at any rate in appearance, of the Athenian funerary lekythi of later days).

strongly recalls the Etruscan sepulchres. This is an important contribution to the evidence which is gradually accumulating of racial connexion between the Minoans and the Etruscans. The evidence of the tomb being opened from time to time in order to permit of religious rites being celebrated and funerary offerings made is very curious.

A fine chamber-tomb of the Third Late Minoan period was opened by Sir Arthur Evans at Milatos on the north coast of Crete.[1] It contained two *larnakes* and a most interesting collection of pottery vases of the Ialysian type carefully arranged for the use of the dead. One of the *larnakes* has a painted representation of the descent of the armed god Velchanos, probably on to the sea, as we see a fish depicted below him (Fig. 52).

A great number of *larnakes* (often in the shape of baths (Fig. 63) rather than of true coffins) were also found in the tombs at Palaikastro.[2] The decoration of these *larnakes* is very interesting. They are apparently made in imitation of wooden chests bound with metal bands. Ringhandles on chest and lid represent metal rings, and raised bands round the chest represent the metal bands of the model. Painted designs cover its sides, conventionalized papyrus tufts with linked spirals, and a typical Late Minoan design of interlacing wavy lines and scallops, being the commonest. Sir Arthur Evans points out[3] that these designs are often very Egyptian in character, and this Egyptian spirit in funerary decoration is illustrated in the decoration of the splendid painted limestone coffin found by the Italian explorers at Hagia Triada.[4] The ends of this sarcophagus (Pl. XXIX) are decorated with purely Minoan paintings of divine

[1] *Prehistoric Tombs*, pp. 93 *ff.*
[2] *B.S.A. Ann.*, VIII, Fig. 15 (p. 298); XI, Fig. 17 (p. 294).
[3] *Prehistoric Tombs*, pp. 9, 10.
[4] Paribeni, *Rendiconti*, XIII, pp. 343–348.

personages in chariots drawn by griffins. The sides (Pl. XXVIII) have designs in which an adaptation of Egyptian funerary paintings, such as we see in the *Book of the Dead*, is quite clear, though part of the religious ceremony shewn is purely Minoan in character. On the best preserved side a woman wearing the baggy skirt of a man (which looks like the modern Cretan *βράκαις*; p. 233), is pouring into a great *lebes* some liquid from an amphora.

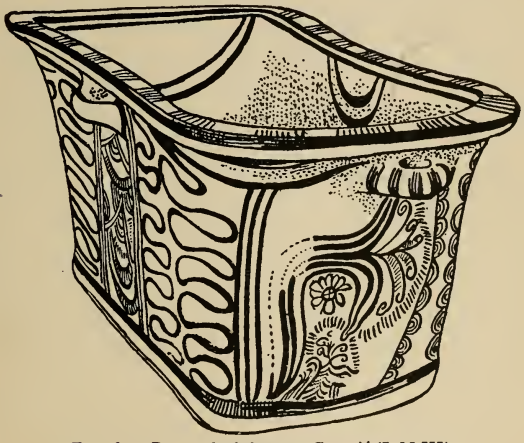


FIG. 63.—Pottery bath-larnax; Gourniá (L.M.III).
Scale c. $\frac{1}{12}$.

The *lebes* stands between two crocketed conical pillars, raised on pedestals of variegated stone. On each pillar is a "double axe" surmounted by a bird which looks very like a magpie. Behind this woman stands another, who wears a tiara and the long-waisted gown or ungirt *chiton* characteristic of the *male* dress of the continental Mycenaeans (see p. 234), and holds two footless amphorae slung on a pole or yoke over her shoulders. She is followed by a man, also wearing a long gown, who plays on a great

lyre. This scene is Minoan enough. But then comes another scene the first actors in which have their backs turned to the priestesses and the musician. They are three men, wearing the baggy waist-clout two of them, carrying in both hands small calves, while the first has what is apparently a model of a boat. These offerings they bear to a man, wearing again the Mycenaean long *chiton*, who stands upright and immobile on a pedestal before the door of a building. By his side is a tree. The resemblance of this scene to the well-known Egyptian representation of the mummy standing upright before the door of his tomb, with the sacred persea-trees at its side, while the relatives bring offerings, is striking.

On the other side we see a woman—or fair-skinned man—dressed in the baggy skirt and the short-sleeved *chiton* which the Northern Greeks wore (as well as the long gown) at this period,[1] offering a dish of fruit and an ewer of liquid on an altar behind which are a pillar with axe and bird, and a higher altar on which are three "horns of consecration" with an olive-tree beyond. Behind her are two calves and an ox bound for sacrifice, laid on a table, over which a man, in voluminous robes and with his hair hanging down his back, is playing vigorously on a double flute. Behind him are three women the upper part of whose bodies are lost. This scene is quite Minoan, though the bound ox looks very Egyptian. The adaptation of the second part of the other scene from the Egyptian prototype is quite clear, and is a most interesting example of the eclecticism of the Minoan artist. We cannot imagine an Egyptian artist adapting a Minoan picture for any purpose, least of all for the mysterious ceremonies of the tomb.

Otherwise the sarcophagus is decorated with spirals and rosettes in the usual manner. Its colour, in which blue, yellow, red, white, and black are used, is brilliantly

[1] See p. 233.

(From a reproduction)

Candia Museum

CRETE

THE HAGIA TRIADA SARCOPHAGUS: SIDES

preserved. It is the most important document we possess on the subject of Minoan funerary rites. The part which the "double axe" and the "horns of consecration" play in it are very significant of their religious importance. The bird is a new addition to our repertory of Minoan religious emblems if it is a magpie. Doves appear, associated with a nude goddess, on golden plaques from the Mycenaean shaft-graves, but other birds are unknown. One may wonder whether this apparent magpie is not really intended for an eagle, the sacred bird of Zeus, the god of the "double axe." A curious parallel to this eagle on a crocketed pillar is supplied by a common Egyptian representation of this very period (XIXth Dynasty), in which we see a hawk standing on the Ṭeṭ, the Egyptian emblem of stability, which is also a crocketed pillar in appearance, though it probably represented the backbone of the god Osiris originally. This pillar with the hawk is often found duplicated, like the bird and pillar on this sarcophagus. The emblem is specially connected with the god Ptaḥ. Have we here another adaptation of an Egyptian idea, or does the resemblance go back to the beginning of time, when Egyptian and Aegean religious ideas had perhaps a common origin, or is it fortuitous ?

The wearing of male dress by women in this cult scene is very curious, and undoubtedly had some ritual significance. Following up a suggestion of Dr. Rodenwaldt's, we may compare it with the wearing of the male waist-clout by the girls in the Knossian fresco of the bull-leaping and of the male gown by the women (if they are women) in the chariot at Tiryns. Male dress might be worn by women when engaged in active exercise, for which the heavy Minoan skirts would be unfitted. Is it possible that the capturing of the bull unharmed for religious purposes was always partly carried out by priestesses dressed for the purpose in male costume (like Artemis), and that the women dressed as men

on the Hagia Triada sarcophagus had taken part in the capture of the bull or ox shewn bound for sacrifice, which had to be bound alive, and was sacrificed at the tomb ? The liquid poured into the *lebes* may then be, as has been suggested, the blood of the sacrifice. If so, the bull-leaping of the Knossian fresco was a religious ceremony.

In Cyprus, at Enkòmi, the Late Minoan tombs are of the pit-cave and chamber types. "The tombs have been originally approached either by a vertical shaft or a sloping *dromos*, except those along the face of the crag. Each had a regularly constructed entrance, with jambs and lintel. But beyond this they differed, inasmuch as some had been sunk vertically from the surface, then cased with masonry and covered in with carefully-hewn slabs of stone ; while the others had, so to speak, been burrowed into the rock from the entrance-shaft, taking an irregularly cavernous shape. Tombs of both descriptions were found close beside each other." [1] As we have seen,[2] the Enkòmi necropolis is a good example of the way in which tombs were re-used. These evidently date from the period of the first Minoan occupation in the fourteenth century, but many of them were reoccupied four hundred years later, when the decadent Minoan culture of Cyprus was contemporary with the Geometric period in Crete and Greece.

In these tombs large vases were placed which seem to have been used as cinerary urns, the modern practice of cremation having now been introduced, together with the general use of iron, from Greece. They were ornamented with painted scenes of grandees driving in chariots, bulls and other representations that still carry on the tradition of the old Minoan art, though in a very debased form (Figs. 34, 35, 51). The practice of painting the *larnakes* had been transferred to the cinerary urns.

[1] Murray, *Excavations in Cyprus*, p. 6. [2] Pp. 24, 105.

(From a reproduction)

Candia Museum

CRETE

THE HAGIA TRIADA SARCOPHAGUS: ENDS

An interesting Cretan tomb of the transition period from the Age of Bronze to that of Iron, from the last sub-Minoan period of ceramic art to the oldest "Dipylon" Geometric, was found at Moulianà by a peasant, who informed M. Xanthoudides that "uncremated bones were found with the bronze swords and brooches and the false-necked vase on one side of the tomb, while on the other were found an iron sword and dagger and cremated bones in a cinerary geometric urn, resembling in design the early Greek vases found near the Dipylon gate at Athens. The earlier remains were apparently not plundered or destroyed, and Mr. Evans argues that we cannot assume so unusual an amount of reverence in an invading foreigner. We may here have an instance of iron weapons succeeding bronze, and cremation succeeding burial, in the same race, and even in the same family."[1]

To the same age of transition belong the tombs of "Thunder Hill," near Kavousi, in the same part of Crete, where Miss Boyd "found a short iron sword and bronze brooches, in company with vases transitional between Minoan and Geometric, and uncremated skeletons."[2] The purely geometric (Iron Age) tombs excavated by Mr. Hogarth at Knossos are still of the old *tholos* shape, and the false-necked vase or *Bügelkanne* still survives in them in a debased form.[3]

With the tombs of the Iron Age we must call a halt; with them Greek, as distinct from Aegean, funerary practices begin.

[1] Burrows, *Discoveries in Crete*, pp. 101, 102; Evans, *Prehistoric Tombs*, pp. 112, 134; Xanthoudides, in Ἐφ. Ἀρχ, 1904, p. 22 *ff.*

[2] Burrows, *loc. cit.*, p. 101; H. A. Boyd, in *Am. Journ. Arch.*, V, 1901, Figs. 2, 3, pp. 128–137.

[3] Hogarth, in *B.S.A. Ann.*, VI, pp. 83, 84, Fig. 26.

CHAPTER VII.—DECORATION, PAINTING AND SCULPTURE, SMALLER ART

THE chief decorations of the palaces we have described were the splendid fresco-paintings already mentioned.

This art of painting in true *fresco*, as opposed to the *distemper* painting of the Egyptians, was peculiar to the Aegeans. It arose, as Mr. Noel Heaton has pointed out,[1] out of the Aegean custom of plastering the outside and inside of the rubble and stone built houses as a protection from the weather. I may go further, and suggest that this custom of plastering originated in the clay plaster which the Neolithic and Chalcolithic Aegeans who lived in reed huts used to stop up the crevices in their abodes. For Greece is not Egypt, and though Neolithic Egyptians might live in a wattle hut without any daub, in Greece the daub was necessary. When used to plaster the rude stone buildings of the early period, the clay would necessarily soon get mixed with powdered limestone from the hewn stones, and then the first stucco was made (burnt lime being soon added), with the addition of stones, bits of pottery, and straw which the livers in reed huts had doubtless used to bind their clay. In a specimen of early Minoan stucco from Vasiliki examined by Mr. Heaton there was but 40 per cent. carbonate of lime, the rest being clay of a peculiar character, easily and strongly hardening,

[1] RODENWALDT, *Tiryns*, II, p. 211 *ff*. I have the authority of Mr. Heaton to describe the Egyptian wall-painting as *distemper* rather than *tempera*-painting.

no doubt (I would suggest) the clay chiefly used by the reed-hut builders.

And then the stucco was decorated with colour. The colour of which we have the oldest specimen is the simple red prepared from burnt ochre-clay. The simple ochre yellow must have been known almost as soon, and the black, prepared from burnt bones, etc. Green and blue were later additions, not being known till the early Middle Minoan or the latter part of the long Third Early Minoan period. And there is little doubt as to where they came from. They were imports from Egypt. Their composition is the same as the Egyptian blue, being made of a blue glass frit, prepared by fusing sand with soda and copper ore. The Egyptian origin of this blue cannot be doubted. The green which we know in Middle Minoan times had a bluish tinge like that used in Egypt. A pure green is not met with till later, when we find at Tiryns a brilliant colour evidently made of malachite. A colour used by the Minoans but not by the Egyptians is grey, which constantly figures in the Late Minoan frescoes. A fine deep red also came into use, made from haematite, which is 90 per cent. pure oxide of iron. And a brown was used, made of a mixture of red with yellow and black; a dark green by mixing blue and yellow.

Thus was the palette of the Minoan fresco-painter set out at the time of the zenith of his art. But when his ancestors invented it, they had only the light red, the yellow, and the black to work with—perhaps the first alone.

The colour was applied from the first, and always, by the true *fresco* method. Of this there is no doubt. No medium was used. The early painters found that when laid fresh upon the wet surface of the caustic lime plaster, the colour stuck, and was indelible. Their descendants remained true to the method, and not we find, the Egyptian style of distempering adopted for a change.

As time went on, the fresco-painters grew more and more skilled in their art of decorating with coloured lines and borders; they essayed to represent human figures, also plants and animals, and to portray the life of men and gods on the walls of princely halls and chambers. For this purpose the plaster became made with ever greater care, in order to obtain the smoothest and whitest surface possible for the painter to exercise his art upon. In the Late Minoan period we find it containing some 94 per cent. carbonate of lime; a pure lime stucco. The plaster was usually applied in two layers, the upper one being very thin, and consisting of the finest stucco for the painter to work on. He must have performed his part very quickly, before the plaster dried, which accounts for the sketchy nature of some of the designs. Colours were placed above colours; the eye, the hair, or necklace of a male figure being, for instance, usually painted over the red body. The result is sometimes disastrous if the colours are affected in any way. Black is the most fugitive colour of the Minoan palette, and so the hair of the figures in some of the frescoes has entirely disappeared, as in the case of the ladies at the garlanded windows (found at Mycenae), of whose heads nothing but the bald white skulls remain.[1] In the earlier frescoes of the Late Minoan period very often no contour-line was used, a face being simply painted on in plain red wash. No shading or indication of relief appears;[2] the picture is in two dimensions only. It is purely decorative, and friezes shewing human beings, animals, or buildings, were treated in exactly the same way as dadoes of flowers, trees, or simple lines. Perspective was unknown, of course, and the Minoan endeavoured to give the idea

[1] *Ath. Mitt.*, XXXVI, Pl. IX.

[2] There is an apparent exception to this in the cross-hatching of the bellies of the griffins in the Knossian Throne-room, but one doubts whether this was intended to indicate relief.

of space without it, with the result that his figures seem to be flying in the air. The Egyptian could not conceive of a figure without its feet on the ground, he could not leave the ground to the imagination, so he never depicted his people in the air, as the Minoan did. The rocky terraces and the clouds of Greece supplied a frame to the picture which soon became conventional, and is found on metal vases as well as in painting. Otherwise there is no background, properly speaking,

FIG. 64.—Painted stucco floor at Tiryns (Late Myc., L.M.III). *Scale c.* $\frac{1}{5}$.

and the figures are painted on a sheet of blue or of yellow ochre, which often changes arbitrarily.[1]

The first wall-decoration must have consisted of simple lines of colour on the surface of the plaster, left white or painted red.[2] This plain scheme was always preserved in the best period for the stucco pavements, which at Knossos have simply a plain red line about a foot from the walls. On the walls, however, dadoes and friezes of conventional flowers and rosettes first appeared, and then, probably in the Third Middle Minoan period, friezes depicting human beings and

[1] As in the Mycenaean fresco, *Ath. Mitt.*, XXXVI, Pl. X.

[2] That red was the first colour used is a very probable suggestion of Mr. Noel Heaton's.

other objects and scenes, religious processions, bull-leaping, and so forth. This may have been in imitation of Egyptian wall-painting, but the peculiar Minoan.

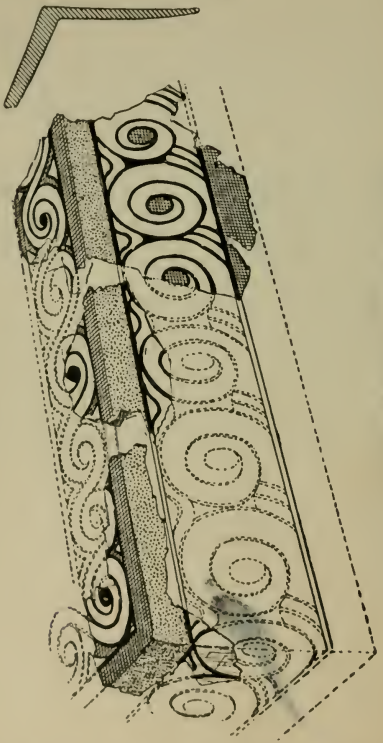


FIG. 65.—Painted steps at Tiryns (Early Myc., L.M I). *Scale c.* $\frac{1}{3}$.

technique, which was of purely Cretan origin, was preserved till the end. In the Third Late Minoan period we find the floors also decorated with conventional designs, as at Tiryns, where the octopus alternates with

a pair of dolphins (Fig. 64), and the steps of the older palace have painted spiral ornamentation (Fig. 65). The ceilings were apparently painted in the same way with patterns of interlaced spirals and other motives, which we see imitated in relief sculpture on the ceiling at Orchomenos.[1] This relief in stone was an eternal reproduction for the tomb of the decoration in stucco relief, which was evolved at Knossos from the simple flat fresco; again, no doubt, in imitation of Egypt, but still entirely Minoan in technique. The painted relief work, giving a three-dimensional picture, was used at Knossos side by side with the flat fresco; no examples of it have been found in continental Greece. The hieroglyphic script was never used in decorative wise on walls, as it was in Egypt.

The work having to be carried out quickly, one or two simple mechanical aids were utilized by the painter. Straight lines were ruled by means of a taut string, the impression of which is often found on the plaster. A circle of metal or wood gave the form of a rosette; once the impression is seen of a disk used for this purpose. Otherwise all was executed in a swift freehand. A foresketch was sometimes incised with a piece of stick (at Knossos), more usually roughly indicated by a red or yellow line. Once painted in, the picture could hardly be altered; the tail of the bull in the bull-leaping fresco at Tiryns was so altered, so that the animal appears to have two tails.[2] Working hurriedly, the decorator did not always think out his design so as to space it well, with the result that he very often took no account whatever of corners in the rooms; the corner may come between two flowers, for instance, and nearer to one than to the other (Fig. 66). An Egyptian, with a greater feeling for symmetry than the Minoan evidently possessed, and using a dry-painting technique,

[1] Perrot-Chipiez, *Hist. de l'Art*, VI, Fig. 221.
[2] Schuchhardt, *Schliemann*, Fig. 111.

would never have done this. The decorator who put in the dado below and the line or spiral decoration above the main frieze always worked at the same time as the plasterer, when the upper layer of stucco was fresh laid on for him. But the master painter who executed the great frieze in the middle, of a procession or what not, could not always be on the spot at the same time ; so he would paint his picture on his own plaster surface at his own time, perhaps in a studio at a considerable distance away, and then it would be transported to the

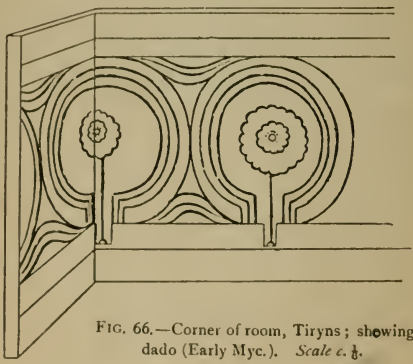


FIG. 66.—Corner of room, Tiryns ; showing dado (Early Myc.). *Scale c.* $\frac{1}{8}$.

palace, no doubt in a wooden frame, and, the frame being removed, was inserted in a space cut out or left for it on the wall. A little light plaster covered up the join. It is evident that this procedure was followed in the case of many frescoes, notably that of the flying-fish at Phylakopi in Melos (Pl. XXX, 1), which was very probably transported all the way from Crete, where it had been painted. We can imagine the Melian prince or governor commissioning one of the great masters of his time to paint this splendid fresco, and sending to Crete for it when ready. So the Minoan princes

(Phylakopi ; Pl. iii.*)* *Athens Museum*

(B.S.A. viii, Pl. ii.*)* *Candia Museum*

PHYLAKOPI

1. THE FLYING FISH FRESCO

(Scale : 1/3rd)

KNOSSOS

2. THE IVORY LEAPERS

(Scale : 1/3rd)

decorated their palaces with veritable *chefs d'oeuvre* of the best painters, as well as with the geometrical and freehand borders and dadoes of their own local decorators. The oldest painting of the developed style is perhaps the Knossian fresco of the "Blue Boy" gathering crocuses, if Sir Arthur Evans is right in his attribution of it to the Third Middle Minoan period. Then we find mastery attained with suddenness in the magnificent paintings at Hagia Triada: the cat stalking a pheasant in the undergrowth, with its background of bushes and rocks (Fig. 67), and the man or woman in voluminous and parti-coloured robes, bending over, perhaps in the performance of some ritual act.[1] The Master of Hagia Triada is the greatest Minoan painter that we know. It is noticeable that his plants, good as they are, distinct as they appear to be, and highly naturalistic in treatment, are in reality not distinguishable according to genus and species; they are very clever impressions, but not genuine portraits of plants. The cat is, of course, most interesting, as giving the Egyptian source of the design. But the Minoan master adapted the Egyptian design into a masterpiece of his own, perfectly Minoan in feeling. The way in which the cat walks across the background, in the air, so to speak, with nothing beneath his feet, would have astonished an Egyptian painter, but is quite in keeping with the "free-and-easy," summary spirit of Minoan painting.[2]

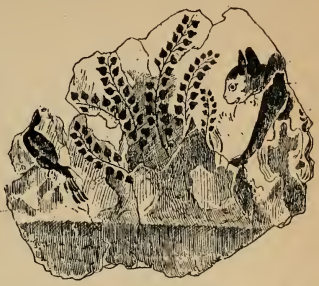


FIG. 67.—Hagia Triada; cat fresco (L.M.I). *Candia Museum.*

[1] Candia Museum.

[2] *J.E.A.*, I, p. 199 *ff.*

Quite different in scale are the contemporary "Miniature-frescoes" of Knossos and Tylissos, in which we see groups of human beings sketched in slight, yet masterly fashion; at Knossos ladies at a window, and a crowd of men and women near a temple or great altar; at Tylissos men and women, sitting or standing, alone and in groups.[1] Here the speediness of the work

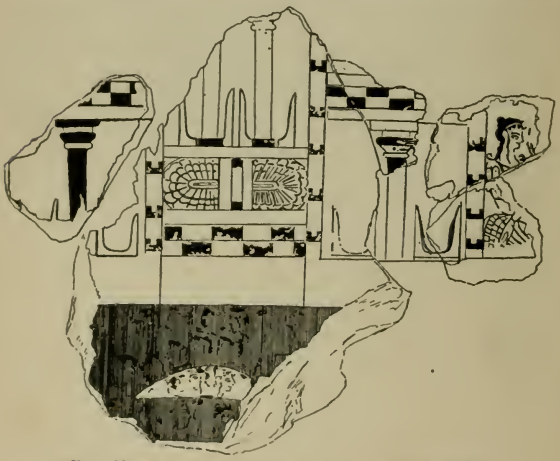


FIG. 68.—Knossos; miniature fresco. *Candia Museum.* (*After J.H.S.*, XX, Pl. V.)

has developed a sort of "shorthand" representation; a crowd is shewn by a mass of faces, heads in outline with no bodies, and to indicate the difference between the sexes the men's heads are drawn in outline on a red background, and the women's on a white one. This was a very simple and summary method; its effect is very curious. These floating heads give an almost eerie impression, as if we were looking at the ghosts of these

[1] Ἀρχ. Ἐφ. 1912, Pll. XVIII, XIX.

Minoan men and women, dead three thousand years ago and more (Fig. 68).

Then at Pseira we see the first appearance of the relief style in the seated lady,[1] discovered by Mr. Seager, whose carefully painted dress gives us a very good idea of the elaborate patterns with which the Minoans ornamented their textile products. From Pseira the flying-fish fresco at Phylakopi (a Cretan pro-

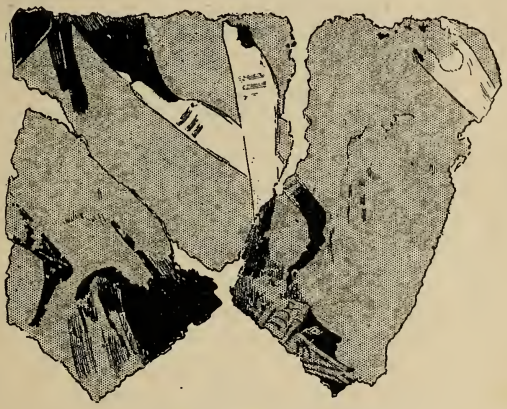


FIG. 69.—Mycenae; fragment of fresco of warriors. *Athens Museum. Scale c.* ⅓.

duction) takes us across to the Continent, where in the frescoes of Mycenae and Tiryns, lately discovered, we find proof that the new style began in Greece almost as early as it did in Crete. It came with Cretan civilization, and was preserved by the continental "Mycenaean" painters till the end. At Mycenae was found a piece representing a scene of war, with chariots, horses, and warriors (Fig. 69), and the picture, already mentioned, of ladies seated at a window decorated with

[1] *Pseira*, Pl. V.

hanging garlands or "swags" suspended from small "double axes."[1] At Tiryns we have remains of hunting-scenes, very fine in colour, with splendid reds and blues (Fig. 70), like those of Hagia Triada and the "miniature-frescoes." And further, we have remains of fine bands of conventional ornament, notably one composed of a row of shields placed side by side, coloured to represent the flecked and spotted hides of which they were made

FIG. 70.—Tiryns; early palace. Fresco of huntsmen. (Early Myc. = L.M.I). *Athens Museum.* *Scale* ⅓.

(*cf.* Pl. XXXII, 2), and another of the Egypto-Minoan spiral and flower design which was imitated in the ceiling at Orchomenos.

The great relief and flat frescoes of Knossos follow next in the order of time; in relief the bull's head (Fig. 77) and the prince walking in the open air, with his head crowned by the mighty feather head-dress which has an oddly Mexican effect,[2] in the flat ordinary style the Cup-bearer (Fig. 71), the bull-leaping boy and girls,[3] and the girl's head which so irresistibly reminds us

[1] RODENWALDT, *Ath. Mitt.*, XXXVI (1911), p. 221 ff., Pl. IX–XII. Fig. 69 shews one of these frescoes, in which we see the Mycenaean helmet and greaves well represented (see p. 244).

[2] *Anc. Hist. N.E.*, Pl. IV, 1. [3] *Ibid.*, 2.

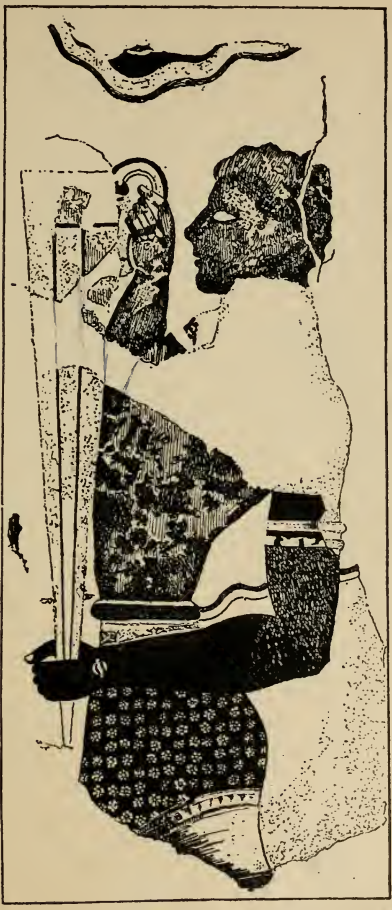


FIG. 71.—Knossos; the cup-bearer fresco.
Candia Museum. Original life-size.
(After *Monthly Review*, March, 1901, p. 124.)

of the "little girl, who had a little curl, *right* in the middle of her forehead" (Fig. 72).

For the decadence we are referred to Tiryns, where, in the Third Late Minoan (Late Mycenaean) period, the newly rebuilt palace was provided with a scheme of decoration which in many respects seems to have followed the model of the older. Of its hunting scenes we possess groups of men, wearing the same costume as their forebears in Fig. 70, the sleeved and girt *chiton* (see p. 234), and carrying the spear behind their masters, or leading the great hounds to the chase (Fig. 73). Of the masters (or mistresses) we see two, riding in the chariot to the hunt; white-faced, long-curled figures standing up in the regulation attitude of dignity (Fig. 74). Whether they are ladies wearing the sleeved gown (which Mycenaean men also wore) for purposes of sport, or young princes, depicted as pale, just as Egyptian princes, who naturally led the sheltered life, often were depicted, we do not know. Their hair might just as well be that of men as of women. Dr. Rodenwaldt assumes the female sex of the charioteers, and compares them with Atalante in Calydon; a very pretty comparison, since all these legends must have originated in some fact or tale of the Mycenaean age. Since Hera was worshipped at Tiryns, these may be her priestesses going forth to the chase, attended by the male δοῦλοι of the sanctuary. But the possibility that young princes merely are intended cannot be lost sight of.

FIG. 72.—Knossos; fresco of a girl. *Candia Museum. Scale* ½.

Of the quarry we see something in the skilfully

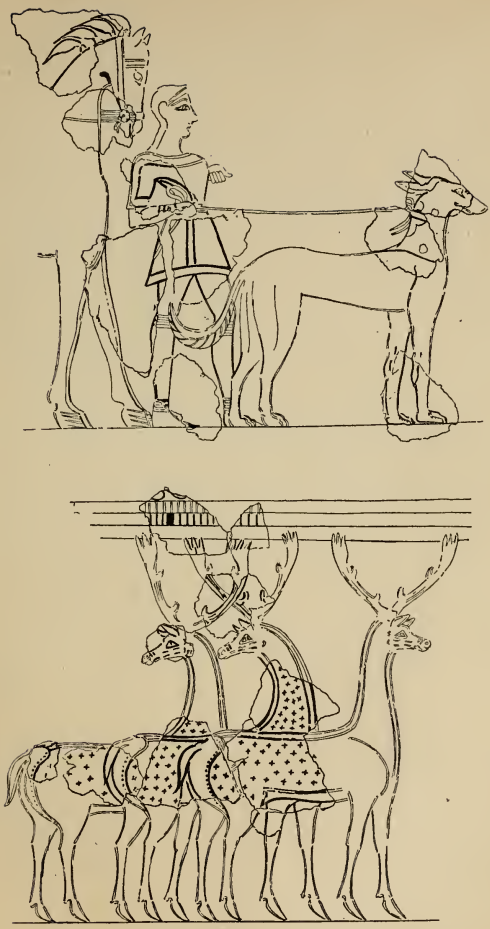


FIG. 73.—Tiryns; later palace. Frescoes of the hunt. (Late Myc. = L.M. III). *Athens Museum. Scale c.* $\frac{1}{7}$.

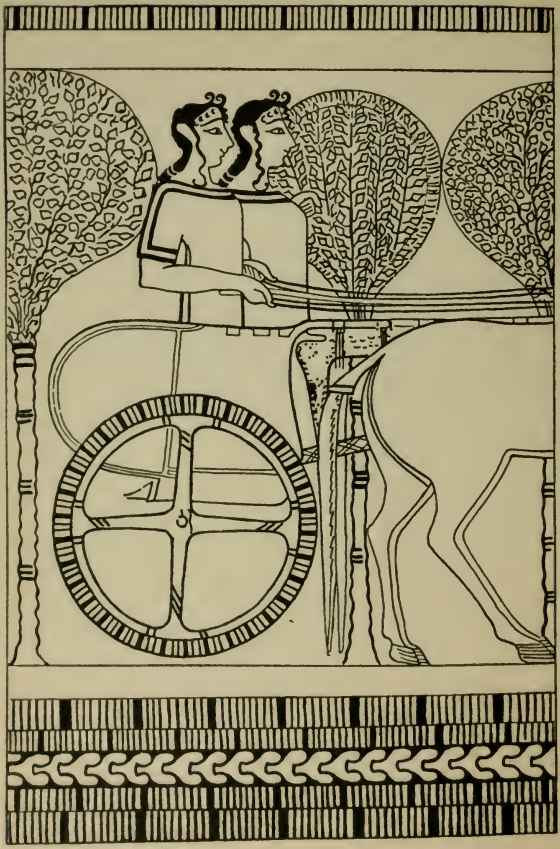


FIG. 74.—Tiryns; later palace. Chariot fresco (restored). (Late Myc. = L. M. III). *Athens Museum. Scale c.* ¼.

restored group of the boar pursued by the hounds (Fig. 75). The impression of swift movement is given extremely well, just as we seē in other Minoan works of art, notably the Mycenaean dagger-blades. The whole group flies through the air in Minoan fashion, with

FIG. 75.—Tiryns; later palace. Fresco of the boar hunt. (Late Myc. = L. M. III). *Athens Museum.* *Scale* $\frac{1}{3}$.

bodies elongated, stretching themselves out in the chase, against a background of blue sky across which wave twisted plant-stems of indeterminate character. The effect recalls amazingly some mediaeval tapestry. The grizzled hirsute fell of the boar is reproduced by stripes of light red and yellow, the latter dappled with

black streaks. The dogs, which were evidently of a woolly-coated, hairy-tailed type, with a regular hound's head, are white, with dapples and spots of red, blue, or black. At the end of the picture appears a man's arm with boar-spear ready to stick the onrushing pig.

Another frieze of pictures depicted a solemn procession of women, no doubt priestesses of Hera (or rather her Minoan predecessor). One of the figures has been built up from a number of small fragments, and is shewn in Fig. 76. The idea of solemn progress is given in the pompous style of the figure, with its elaborate manner of holding the ivory *pyxis* which it carries. The exaggerated projection of the breast was no doubt intended to add dignity to the figure, but to our eyes the artifice fails, as the resulting deformation of shoulders and arms, deformed even for Minoan convention, is hideous. The art of this figure is becoming decadent. This we see, too, in the formal *Stilisirung* of the hair, which is treated in more than "conventional" manner, the curls over the forehead being exactly like spirals in a decorative band.[1] We see in it the beginning of the fall from the zenith of the style to which it belongs, marked perhaps by the Knossian Cupbearer. With that and other masterpieces of the same period the Minoan fresco-painters reached the height of their art. They never solved the problem of representing the human figure as it really was. The great *crux*, the representation of shoulders and breast, was never successfully surmounted by them any more than by the Egyptians. The latter were the most successful with their convention of representing the lower and upper parts of the body in profile and the torso in full face. This imposes upon us even now, and does not always look unnatural. The Minoan usually preferred the convention which we see exaggerated in this figure,

[1] This is also seen in the frescoes from the "House of Kadmos" at Thebes, which must be of the same date (see p. 196).

FIG. 76.—Tiryns; later palace. Fresco of the priestess (restored). (Late Myc. = L. M. III). *Athens Museum*. *Scale c.* $\frac{1}{8}$.

by which one shoulder is dragged round in front of the breast. This very method had been tried once by the Egyptians long before, in the days of the Vth Dynasty, with disastrous results, which we see, to take an instance, in the reliefs of the tomb of Neferkaseshem at Sakkarah.[1] The figures, like the Tirynthian priestess, look absolutely disjointed.

Compared with the "Cupbearer," she is wooden; compared with the agitated female figure at Hagia Triada she is a stock and a stone. And in the other L.M.III frescoes from Tiryns we see great stiffness and woodenness of drawing and conception, when we compare them with the older pictures from the same place and from Knossos. Full of "go" as the boarhunt is, it is crude and primitive in execution when compared with the flying-fish fresco at Phylakopi. And the colours of the Tirynthian decadence are poor in comparison with those of the earlier age.

Contemporary with the Tirynthian picture of the priestess-procession are the fragments of another similar procession-fresco, found at Thebes in Boeotia, which was probably painted by the same artist, since the hair of the female figures is represented in exactly the same conventional way (resembling architectural spirals rather than hair) as that of the Tirynthian priestesses.[2]

We see the last echoes of the fresco-paintings in the decorative friezes of the Cypriote-Minoan vases from Enkòmi (Figs. 34, 51), caricatures of the formal Tirynthian procession and hunting-scenes painted on vases in all good faith as reproducing *in petto* the most admired art of the great masters. The barbarous scrawl on a fragment of pot from Tiryns[3] is the last gasp of Minoan painting.

[1] Capart, *Une Rue de Tombeaux*, Pll. XVI, XVII, LXXVIII, LXXIX.

[2] Keramopoullos, ἡ οἰκία τοῦ Κάδμου, Ἐφ. Ἀρχ. p. 57 *ff.*, Pll. I–III.

[3] Schuchhardt, Fig. 132.

We return to the relief style, of which the next examples, after the seated lady of Pseira, were found at Knossos; in low relief, the prince walking amid the meads while butterflies fly around him (p. 188), and in high relief, the blood-red bull's head, fitly discovered in the home of the Minotaur (Fig. 77). Here we have returned to the masterpieces of the best period. It is regrettable that the face of the prince is destroyed, as the method of its treatment in relief would have been

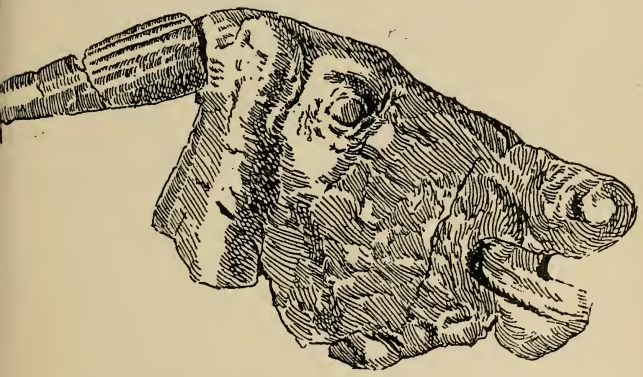


FIG. 77.—Knossos; bull's head in relief, painted *gesso duro*. *Candia Museum*. *Life-size*. (After *B.S.A. Ann.*, VI, Fig. 10.)

most interesting to see. The Egyptians at an earlier period (XIth Dynasty) had produced notable contributions of colour and relief sculpture of faces in soft limestone, the rise and fall of the cheeks over the cheek-bones, and the contours of lips and nose and chin being most delicately indicated in the relief, and the painting giving the colour. A good instance is a fine but, unhappily, damaged portrait of a king found during the Egypt Exploration Fund's excavations of the funerary temple of King Mentuhetep III at Thebes in 1903, and

published by Professor Naville and myself in the *XIth Dynasty Temple at Deir el Bahari*, III, Pl. XII, Fig. 2. Another instance of the delicate Egyptian handling of a face in relief is seen in the Libyan prisoner, *ibid.*, Pl. XIII, 2, which is in the British Museum (No. 1405). I take these two instances from work known to me at first hand; there are, of course, plenty of others equally good. It is probable that had we the face of the Knossian prince we should see in it the same contrast with the Egyptian relief work that we see when we compare the Minoan frescoes with the Egyptian wall-paintings; extraordinary power and vigour, swift *flüchtige* execution, inferior accuracy, greater insight, less knowledge, less art but more artistry.

The Minoan was, no doubt, Minoan in style. But that the inspiration to execute coloured stucco reliefs came to him from knowledge of the Egyptian coloured reliefs in soft white limestone there can equally be no doubt.

Of stone reliefs we have not many. In the Cyclades in the Early Minoan period spiral-band designs had already appeared on carved vases, shaped as models of stone houses (p. 48), before even they were painted on plaster probably. In later times the carved stone was a translation from the fresco-painting; this we see in the Orchomenos ceilings. The intermediate form in stucco relief existed commonly. And stone vases had relief bands of stone ornament, as we see at Knossos. The well-known Mycenaean "triglyph" design, with its two halves of a deeply-cut elongated rosette divided in two by parallel vertical bands, is found everywhere in stone; at Tiryns also in *kyanos*, or blue glass paste; a veritable *θριγκὸς κυάνοιο*. The precise origin of this curious and not very beautiful design is uncertain; it may be derived from wood-carving, but of Minoan wood-carving we possess nothing to tell us whether or no there was ever a Cretan Grinling Gibbons; no wood lasts

(From the reproduction in the British Museum) *Athens Museum*

British Museum

MYCENAE

1. THE "SIEGE CUP" FRAGMENT : SILVER
(Scale : 2/3rds)

2. FRAGMENT OF STONE RELIEF
(Scale : 1/8th)

in Greek earth. An origin in a carved wooden beam is very probable, since the design usually appears as the ornament of an architrave, and the oldest Minoan architraves were no doubt of wood; we see the ends of round wooden beams, looking like disks or medallions in relief, often imitated in stonework or representations of it.

A simpler "triglyph" ornament, consisting of groups of parallel lines in relief, alternating with blank spaces, is seen on the sides of several stone seats or *exedrae* (Pl. X, 2) at Hagia Triada.

FIG. 78.—Grave-stele, Mycenae. *Scale* $\frac{1}{15}$.

Of relief sculpture in stone representing human beings, etc., on the large scale, we have nothing but the crudely executed stelae placed over the shaft-graves at Mycenae (Fig. 78).[1] If these are of L.M.I. date, as they should be, they give a very poor idea of the capabilities of the sculptors. Surely the men who could execute the ceiling at Orchomenos could do better than this. The stelae are possibly later, well on in the L.M.III period. There are also two fragments of sculptured bas-relief in grey alabaster, from Mycenae, shewing part of a bull and a tree, which are in the British Museum (Pl. XXXI, 2). These are possibly Early Mycenaean (L.M.I), and

[1] See p. 10.

come from a corridor-dado.[1] No more important specimens of stone reliefs are known.

Of relief as applied to separate objects we have a fine specimen in the great stone weight, 17 inches high, found at Knossos,[2] which has upon it a well-designed octopus in relief, carved on each of the two broad sides, and with the tentacles coming round on to the two narrow sides. This is a good example of the way in which the Minoans would decorate even the most ordinary objects.

Of relief sculpture on a small scale we have, however, many specimens in the shape of carved stone vases and other objects which show how well the Minoans could work in stone. After the octopus-weight we may well mention the stone vase with carved marine design, illustrated by Tsountas-Manatt (their Fig. 24), and the big limestone vase with spiral decoration in relief found by Evans at Knossos (*B.S.A. Ann.*, VII, Fig. 30). The famous Hagia Triada vases, which have already been described in Chapter III, are perhaps to be grouped with the triumphs of Minoan toreutic art rather than with the failures of its stone sculpture on the larger scale. They are copies of metal prototypes, and their art is directly derived from that of the metal-workers.

Sculpture in the round began in the Cyclades in the Chalcolithic Age, with the figures of Parian marble, already mentioned, which were placed in the cist-graves. These are mostly flat dolls of small size, sometimes fiddle-shaped (Pl. XIV, 2, 3); but large figures occur,[3] and in the Ashmolean Museum is a head of one with the features and hair unusually well indicated (Pl. XIV, 1).[4] Two figures of a man, seated, and one playing the double flute, the other the harp,[5] are unique.

[1] See Prof. LETHABY's article in *The Builder*, Feb. 6, 1914 (p. 154).
[2] A cast of this is in the British Museum.
[3] TSOUNTAS-MANATT, Fig. 132.
[4] RIDGEWAY, *Early Age of Greece*, Fig. 26.
[5] PERROT-CHIPIEZ, Vol. VI, Figs. 357, 358.

This promise was, however, not realized. In Crete nothing bigger than the little figures from Koumása (Pl. XIV, 4)[1] seems to have been made, and, in spite of their knowledge of the statues of Egypt, large sculpture in the round remained unknown to the Aegeans.[2] However, they triumphed in the art of making small figures, though in pottery, metal, and ivory, rather than in stone. A small stone sphinx was found at Hagia Triada, but it is probable that it is not of Minoan, but of Anatolian origin.[3] Of the pottery and metal figures we have already spoken (pp. 35, 67); the ivory figures of divers or leapers from Knossos (Pl. XXX, 2) are the masterpieces of this form of Minoan art, and for delicacy and beauty perhaps take the same high place as does the "Harvesters" vase for its strength and vigour, and the "Chieftain" vase for dignity and grace. The beautiful carving of the arms, the delicacy of the faces, the art with which the gold-plated bronze curls are fitted into the ivory heads (Fig. 79), place them far above any other Aegean work of sculpture in the round or representation of the human figure.

FIG. 79.—Head of leaper; ivory and gold-plated bronze: Knossos. *Candia Museum. Enlarged.*

[1] See p. 51.

[2] So far as I know, only one large stone figure has been found: that of a bull, of which remains were discovered at Knossos (*B.S.A. Ann.*, VII, p. 118). But this was made up of small pieces of soft stone with dowel-holes, so that they could be riveted together; the art of carving a large figure from a monolithic piece of stone, especially hard stone, was unknown.

[3] It is of black steatite. Illustration in DUSSAUD, *Civilisations Préhelléniques*, Fig. 41. I think it cannot be Minoan, and would compare it with the heads of the great Hittite sphinxes at Öyük in Anatolia (*Anc. Hist. Near East*, Pl. XXII, 1), which shew the same type of head, the degenerate copy of an Egyptian original.

Fig. 81.
Ivory mirror handle.
Enkomi, Cyprus.
British Museum.
Scale ½.

A small griffin or dragon from Knossos also shews consummate skill of carving in the way in which it is undercut. The Minoans could carve well, though it may perhaps be questioned whether all the ivory objects found on Minoan, or (more commonly) Mycenaean, sites are really Greek. The carved mirror-handles with their negro-looking women in relief seem rather Syrian in feeling, with perhaps a touch of Egyptian influence. Possibly they were made in Cyprus, where some fine ones of the type were found.[1]

[1] *Excavations in Cyprus*, Pl. II. The style of the lion wrestling with its three mirror handles does not give a true Minoan impression.

The design of the Arimasp slaying the griffin on one of these (Fig. 80) does not look very Minoan, again. The griffin appears constantly in Minoan art like the winged sphinx (Fig. 81); both were originally foreign importations, no doubt from Syria, whence also they came to Egypt. The Arimasp, as we shall see, wears non-Aegean armour, and certainly a non-Minoan helmet, as also do the three curious male heads of ivory, all alike, that were found at places so far apart as Spata in Attica, Mycenae, and Enkomi in Cyprus. Then there is the carved wooden roundel which was found in the tomb of the foreigner Saretbina (XIXth Dynasty) at Sakkârah in Egypt.[1] This, too, with its griffins, lions, and antelopes, though it has a Minoan look, gives at the same time a non-Minoan impression. It may be that these carvings are not purely Aegean, but are the products of a related culture on the South-West coast of Asia Minor, perhaps that which produced the Phaistos Disk. The ivory draught-box from Enkòmi, with its fine reliefs, which are much later in date (probably eleventh–tenth century),[2] will perhaps be a late product of this sub-Mycenaean art, modified by the Syro-Mesopotamian art of the Aramaeans of Sinjirli and Saktjegözü.[3] The Minoan spirit and style of the two oxen resting beneath the trees on the two ends of the box is undoubted. But the style of the two sides, with its hunting-scene, and

Fig. 81.—Ivory mirror-handle with winged sphinx in relief. From Zafer Papoura. *Candia Museum.* Scale ½.

but seems rather to belong to the hypothetical "Syro-Minoan" art of Cilicia (Alashiya), which I have postulated in the *Manchester Egyptian and Oriental Journal*, 1913, p. 41 (see below).

[1] Spiegelberg, *Bl. aus dem Pharaonenreich*, Fig. 20.

[2] *Excavations in Cyprus*, Pl. I.

[3] *Manchester E.O.J.*, 1913, p. 41.

its herd of hunted goats, is absolutely un-Minoan, and is plainly of Assyrian origin. The Minoan element is a most interesting survival.

FIG. 82.—Design of carved ivory staff-head. Kakóvatos.

Of undoubtedly Aegean ivory and bone carving we have specimens in staff-heads (Fig. 82), and the little roundels or disks found in the Mycenaean shaft-graves, at Kakóvatos,[1] and elsewhere. Usually they have incised spiral or fylfot designs; one (possibly a pyxis-lid) with a beautiful little sketch of a leaping bull, now in the British Museum, is here illustrated (Fig. 83). No doubt there was much wood-carving, but it has all perished.

A fine example of Minoan art is the chryselephantine gaming-board discovered at Knossos.[2] This is a rectangular board with an ivory framing covered with gold foil, in which is set a "mosaic of strips and disks of rock crystal, the crystal in turn being alternately backed with silver plaques and a blue paste formed of pounded lapis-lazuli-like glass, the Homeric *kyanos;* and both this and the silver plaques are underlaid with gypsum plaster. The disks or medallions have centres composed of *vesicae piscis* of ivory surrounding a central plate of silver-lined crystal with incurved sides." There are four medallions above, arranged thus o°o°,

FIG. 83.—Ivory roundel. From Enkòmi. *British Museum. Actual size.*

[1] *Ath. Mitt.*, XXXIV, pp. 283–286 (Abb. 5–9).
[2] EVANS, *B.S.A. Ann.*, VII, Fig. 25.

"inserted among crystal bars backed with silver plates." These have also each a looped cloison-border of ivory. There are ten below, arranged thus ⁘, without the border; the *vesicae piscis* were probably of *kyanos*. Each medallion probably had a disk of crystal over it. All round and above are the parallel lines of "bossed and ribbed crystal bars" or of gold-plated ivory inlaid on *kyanos*.

It is evidently a board for the playing of some kind of game such as draughts, such as was common in Egypt, and as we see on the lid of the sub-Mycenaean ivory box from Enkòmi. And, as Sir Arthur Evans says, "in its original condition, with its ivory bands and reliefs still plated with gold, and its crystal plaques and bosses intensifying the glint and glow of the silver foil and cerulean paste below, this gaming-board must have been of truly royal magnificence."[1] Intarsia-work of this kind was not uncommon, and remains of other objects adorned with it were found. Plaques of crystal for inlaying caskets were found, with coloured designs painted on their lower surface, so as to be seen through the crystal. "The best preserved example of this 'backwork on crystal,' as this art was described by seventeenth-century writers, shewed an exquisite miniature painting of a galloping bull on an azure ground, the forepart of which was fairly preserved." A similar process is illustrated by a rock-crystal sword pommel found at Mycenae. In the throne-room at Knossos, where the painting on crystal described above was found, "was also discovered a small agate plaque presenting a relief of a dagger laid upon an artistically folded belt, which supplies an illustration of the glyptic art akin to that of the later cameo engraving, though the veins of the stone in this case run vertically and not in the same plane with the relief."[2]

[1] Evans, *loc. cit.*, VII, p. 81. [2] *Ib.*, VI, p. 41.

The beauty of the Cretan *intaglio* seal-stones or γαλόπετραις (milk-stones) (Fig. 84) is well known. They were often apparently worn on a bracelet, as we see from the Cupbearer-fresco.[1]

FIG 84. — Lentoid seal-intaglio (γαλόπετρα): goddess? Crete. *Enlarged three times.*

The beginnings of the Minoan glyptic art are to be found in ivory and bone carving. Bone was commonly used in Neolithic times for the making of tools, but one does not expect ivory to have been known in Neolithic Crete. However, in the Neolithic settlement at Phaistos was found a piece of unworked ivory, proof positive of connexion with Asia or Africa even at that remote period. The oldest Minoan seals, the conoid and button-shaped signets of the Early Minoan period, found in numbers at Koumása and elsewhere in Crete, were of bone and ivory, and probably, like the oldest Egyptian seals, also of wood. And, as in Egypt, the soft stone steatite was soon used to make the same objects (Fig. 85). The further Egyptian step of glazing the steatite blue or green was not taken, and the plain stone remained the usual material of seals till well on in the Middle Minoan period. We shall see that these seals were at first the sole medium with which the Minoans "wrote": their hieroglyphs developed upon the seals, and out of seal-signs. In the fine period of art that marked the end of the Middle Bronze Age, the art of seal-engraving developed, hard stones, such as amethyst, carnelian,

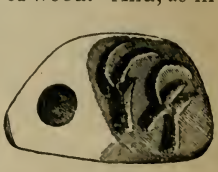


FIG. 85. — Early trapezoidal seal; Crete.

[1] *Ib.*, VI, p. 15.

(*Tiryns* ii. *Abb.* 43.)

Athens Museum

(*Tiryns* ii. *Abb.* 8.)

Candia Museum

MYCENAE

1. Bezel of Gold Ring : 4th grave
(Scale : 2 : 1)

KNOSSOS

2. Pottery fragment with shield and spiral decoration
Scale : 1 3rd)

jasper, agate, and chalcedony being now employed. At the same time the seal developed a regular handle, probably in imitation of some Syrian or Anatolian model. One or two of these seals are very fine works of art (Figs. 86, 87). And now begins a new development. The art of writing has been transferred from the seal-stones as its sole vehicle to the clay tablet, and, probably, to papyrus also. The hieroglyphics had developed into a linear script (p. 216). There was no further need for the use of the seal-stone as a medium for inscriptions, and so its decoration returned to its original type, before the hieroglyphics had developed, and when a single object or scene only was represented. The seal-stones

FIG. 86.—Carnelian signet, Crete. *Scale* 2:1.

of the Late Minoan period are the beautiful lentoid or amygdaloid ("lentil" or "almond"-shaped) "gems," which are among the finest relics of prehistoric Greek art. The engraving is executed in *intaglio*. The representations upon them are commonly of a religious character, like some of the designs of the gold finger-rings (**Fig. 53**). The hieratic design of the two opposed lions, gryphons, sphinxes or other animals, often guarding a deity or a sacred object, as we see the pillar guarded on the architrave of the Lion Gate at Mycenae, is very common (Fig. 87). Wild animals often occur on both lentoid seals and signets (Fig. 87), and on rings (**Pl. XXXII, 1**), and here are certainly represented in connexion with the chase, always a great matter in early Greece. Often the art of the Cretan lapidary was of the most bizarre and grotesque character; his

imagination ran riot, and he produced seal-designs of the most extraordinary fantastic character, as we see from the seal-impressions discovered by Mr. Hogarth at Zakro.[1] Minotaur-like figures we see, with female breasts and sometimes birds' wings and tails, winged ibex-men, a female sphinx with wings of a butterfly, an "Eagle-Lady," lion-headed owls or eagles, and Herne the Hunter himself, with great antlers; weirder still, bucrania with horns terminating in the heads of strange little animals; bucrania with wings and lion's feet; a human-faced seraph or cherub, the head only with wings, quite in the tombstone style of the seven-

FIG. 87.—Carnelian signet, Crete. *Scale* 2:1.

teenth century, but with lion's legs and feet also; the back view of a lion with wings like a bat's, and a hideous human head that looks like a dream of some evil spirit (Fig. 88). Fantastic forms are found often enough on other seals as, for instance, the Minotaurs from Knossos,[2] but probably these from Zakro are the strangest and weirdest products of Minoan art. They shew at any rate how absolutely untrammelled the imagination of the Minoan artist was. And an equal freedom and unconventionality of representation is seen in the two male heads on seals of which impressions have been published recently by Sir Arthur Evans; these are busts of the classical kind, quite unknown to

[1] *J.H.S.*, XXII (1902), Pll. VI–X.
[2] *B.S.A. Ann.*, VII, Figs. 7*a*, *b*.

1

2

3

4

5

6

FIG. 88.—Sealings from Zakro (L.M I). *Enlarged.*

the contemporary art of Egypt or elsewhere, and are, as he says, " the earliest attempt at real portraiture yet discovered in any part of the European area."[1]

The Greek of the Bronze Age handed on the tradition of freedom to his Aryanized successor in the Age of Iron. And with it came the tradition of the technique of vase-painting and of gem-cutting. And in Ionia probably, the tradition of Minoan design survived, till we see it again in the early coin-types.

[1] *Scripta Minoa*, p. 272.

CHAPTER VIII.—THE HIEROGLYPHIC SYSTEM; WEIGHTS AND MEASURES

WHEN MM. Perrot and Chipiez wrote the volume of their monumental *History of Ancient Art*, dealing with Mycenaean Greece, published in 1894, M. Perrot could still say:[1] "As at present advised, we can continue to affirm that for the whole of this period, nowhere, neither in the Peloponnese nor in Greece proper, no more on the buildings than on the thousand and one objects of luxury or domestic use that have come out of the tombs, has there anything been discovered which resembled any kind of writing." We were resigned to the remarkable fact, as it seemed, that the men who created the wonderful culture of the Mycenaean Age were unable to write; it was a peculiarity of their civilization. Three years later, however, Messrs. Tsountas and Manatt were able to say definitely that the Mycenaeans did possess a means of registering their thoughts in a crude hieroglyphic and linear system, chiefly found engraved on Cretan seal-stones, occasionally on vases. Their publication of the fact was, however, conjoined with many conclusions that we now know to be erroneous; for instance, that the Mycenaean signs were not of Greek, or even Cretan, but of Hittite origin, and that they were never used in continental Greece, because the Mycenaeans felt no need of them; they were so "independent" that "for them writing could have . . . little or no attraction."[2] The authors of *The*

[1] PERROT-CHIPIEZ, Vol. VI, p. 985. [2] *The Mycenaean Age*, p. 292.

Mycenaean Age wrote before the discoveries of Sir Arthur Evans at Knossos; we now know that the absence of any discovery of writing at Mycenae is merely a chance, for at the time of the shaft-graves the Minoan-Mycenaean culture was fully equipped with writing systems, of indigenous and specifically Cretan origin, having perhaps a little in common with the later Hittite hieroglyphs, but not much, and far more in touch with the hieroglyphic system of Egypt. Their knowledge of the Cretan pictographic seal-stones was due to Sir Arthur Evans; it is not to be imputed to them as blame that they did not see the full bearing of the new discovery of the English *savant*, whose ideas seemed at first so revolutionary as to be regarded as somewhat fantastic when he published his *Prae-Phoenician Pictographs*. Few archaeologists have, however, been so abundantly justified even in their boldest conclusions as has Sir Arthur Evans. His "revolutionary" ideas usually turn out to be perfectly correct, and this is especially so in regard to the discovery of the Minoan systems of writing, which is due to him alone. He was, as he tells us in the recently published first volume of his great work on the subject, *Scripta Minoa*, never able to bring himself to accept the conclusion that the Mycenaeans could not write, because he knew that not only all over primitive Europe, but all over the world, early man had always possessed some rude manner of picturing his thoughts. Even in the Reindeer period he cut signs on mammoth-ivory, on bone, or horn, or on rocks, which certainly meant something. Then later there were the early rock-cut pictographs of Scandinavia, in Bohuslän; those of Brittany, of Spain, and of Northern Africa. Nearer Greece were the rude signs on primitive Thracian pottery, and on the early pots of Troy. So that it was probable that the early Greeks, too, could write.

It was the collection of certain early seal-stones from

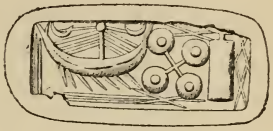
Greece which led Dr. Evans to his great discovery. Originally supposed to be of Peloponnesian origin, they were traced by him to Crete, and an energetic research in the island proved that hundreds such were to be found there. They were certainly Cretan. Study of them soon showed that the signs upon them belonged to a regular form of script (or rather "glypt"), and already in 1893, before M. Perrot had committed himself to the negative view, he was able to communicate the discovery to the Hellenic Society. In 1895 the first general results appeared in *Prae-Phoenician Script*, and next year the supplementary results of *Further Discoveries of Cretan and Aegean Script* were published, with the famous linear inscription on the black steatite offering-table from the Dictaean Cave (p. 28). This settled the question of the existence of a linear script, and also that of the hieroglyphic character of the pictographs on the seal-stones; for one could hardly doubt that if the "Mycenaean" Cretans possessed a system of linear hieroglyphs, the pictographs belonged to a regular system of picture-writing, from which no doubt the linear signs were derived. The analogy to Egypt, with its hieroglyphic and hieratic systems, was obvious. The great confirmation came with the excavation of Knossos in 1900, and the discovery *in situ* of whole collections of clay tablets (Pl. XXXIII, 1), burnt hard by the conflagration of the Palace, on which were inscribed with the stilus in Babylonian fashion complete screeds in the linear system of writing. A clay slip with the same writing which had previously been found on the site, and had been seen by Dr. Evans in 1895, had prepared him for some such a discovery. But the richness of the find was unexpected. That it triumphantly vindicated his views was patent; the question was: What did the records contain? We cannot have all in this life; and here some disappointment is inevitable; the Knossian tablets, when read, will probably prove to contain little

more than accounts and lists of names of slaves and of palace-stores ; there is nothing that looks like an historical record. But, at any rate, we know how the Heroic Greeks wrote ; fire, which has been so fatal to other libraries, has, as Sir Arthur Evans says, preserved that of Knossos to us, for it has baked the tablets of crude clay which otherwise would long ago have perished. For the Minoans seem not to have baked their clay records as the Babylonians did, or, at any rate, subjected them only to a very slight baking process.

The study of these records and a few others found at Phaistos has enabled their discoverer to distinguish two successive periods of development of the linear script, and, with the classification of the earlier hieroglyphic signs on the seal-stones, to trace the whole evolution of the prehistoric Greek art of writing from its beginnings in the Early Minoan period (3000–2500 B.C.) to its end in the Late Minoan period (about 1300–1200 B.C.). Further, he is able to connect the Cretan-Aegean script with the Cypriote syllabary, used for writing Greek in Cyprus down to classical times, and even to suggest that the Phoenician alphabet (and with it the Greek and Latin alphabets too, of course) owes its origin in reality to the Cretan script. In this regard too, then, as in art, Crete appears as the ultimate fount and origin of all modern civilization. The oldest signs of all in Greece are rude linear marks, no doubt belonging to a " signary," as Professor Petrie would call it, which has no visible connexion with the parallel system of purely pictographic signs which first appears on certain rude seals of the Early Minoan period (Fig. 89). These signs are rudely cut, and seem very stiff and odd by the side of the accurately-formed, neatly-arranged hieroglyphs of contemporary Egypt. On the earliest seals they are usually isolated, but in the Middle Minoan period we find them on more elongated seals, associated, and what

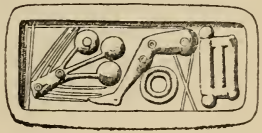
FIG. 89.—Early three-sided seal; Crete. *Enlarged.*

a



a

b



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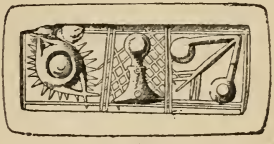


d

FIG. 90.
Carnelian seal-stone with pictographs; Crete.
Enlarged.

FIG. 91.
Four-sided Carnelian seal-stone with pictographs; Crete.
(Three sides shewn; *enlarged*).

are evidently regular successions of ideas, sentences; in fact, of a regular script (Figs. 90, 91). The signs are of varied character, derived, like those of Egypt, from "everything that heaven gives, earth creates, and the water brings," and they bear naturally a close analogy to the hieroglyphs of Egypt, of the Anatolian Hittites, of the early Chinese, or of the Red Indians of North America. When we see a ship with two moons above it (Fig. 91*a*), probably meaning a sea-voyage of two months' duration, we are reminded of American Indian sign-writing rather than the Egyptian hieroglyphic system; but on the whole the script bears most analogy to the Egyptian. Evidently it was not entirely ideographic like Chinese, but, like Egyptian, contained syllabic or semi-alphabetic signs (transferred ideograms), as well as pure ideograms. It is, however, evidently entirely independent of both the Egyptian and Anatolian systems, as they were of each other, though it may bear traces of the influence of both. Of Egyptian influence these traces are quite certain, though few in number; one sign, an adze, is purely Egyptian in form (Fig. 90*b*); another is exactly like the Egyptian ideogram of "gate" (Fig. 91*b*), and the Egyptian *ankh* or sign of life appears. No doubt these were direct borrowings. But the great mass of the symbols are peculiar and characteristically Minoan, especially the plant signs and those connected with the sea.

As in Egypt, the hieroglyphic system was too cumbrous for everyday use, and had to be simplified into a linear or "hieratic" form, of which we find the first examples towards the end of this period, rarely written in ink with a pen in the Egyptian manner, more usually incised upon clay tablets in the Babylonian fashion. The hieroglyphs and simplified signs have been studied by Sir Arthur Evans in his work *Scripta Minoa*. As yet no positive results in the way of decipherment have been attained. We can guess at the meaning of many of the signs, but such guesses are apt

to be very wide of the mark, as we know in the case of Egyptian, where very many of the signs do not in the least mean what we might guess them to mean. The numeral system is easily made out, and we can count in Minoan cyphers though we do not know how to pronounce their names. Nothing more is certainly known.

The only ink-written inscriptions extant are on two pots.[1] It is quite sufficient to shew that the pen and ink must have been regularly used, and no doubt skins and papyrus imported from Egypt were regular and usual materials for inscription in ink. None have survived or can be expected to survive in Greece.[2] We may suppose that ink was used for all documents of any length, for religious screeds and so forth, and we have probably lost with them all hope of knowing anything of a Minoan literature that may have existed. The tablets were probably only used for lesser records, accounts, bills, lists, and so on, as they could easily be stored in boxes. Letters may have been written on tablets, or the invention of the waxed wooden tablet may already have been made. The "folded tablet" which Bellerophon bore from Proitos with the *σήματα λυγρὰ*,[3] sounds like a double wax-covered wooden *πίναξ* of the later fashion. The possibility has occurred to me that the *πίναξ πτυκτὸς* was a "double tablet" in the Babylonian style, the letter being within the separate outer envelope, also of clay (a common arrangement for Babylonian documents), but this is

[1] *B.S.A. Ann.*, 1902, pp. 107 *ff.*; *Scripta Minoa*, p. 29, Fig. 12.

[2] On this account we may doubt whether the story, quoted by Sir Arthur Evans (*Scripta Minoa*, p. 65), of Pliny's about the Lycian papyrus letter which purported to have been written by Sarpedon when at Troy, is really apposite. The "letter" is much more likely to have been Egyptian (and imported from Egypt not too long before), even if it was not a mere piece of priestly mystification, written in ordinary Greek, and taken at its word by the Roman governor, who, Pliny says, "read it."

[3] *Ib.*, VI, 168 *ff.*

perhaps negatived by the absence of any such arrangement among the Knossian tablets; so that the folded tablets of Proitos were probably waxen, and if so, wax tablets were probably known to the Minoans, but have perished, as most wooden Minoan objects have, either from fire or the disintegrating effect of the soil. Sir Arthur Evans is of the opinion, and considers that the numberless clay seals, shewing traces of the string with which they were fastened, which have been found at Knossos, are the sealings of these perished tablets.[1] This may well be, and in that case we can conceive of the closed Minoan tablets, the πτύκτοι πίνακες of Homer, as not unlike the wooden tablet-letters of the second century B.C. discovered in such numbers by Sir Marc-Aurel Stein at Niya in Turkestan, which were secured and sealed in much the same way.[2] In any case, whether already invented by the Minoans or not, the waxed wooden *pugillaris* of classical days was obviously directly descended from the Knossian clay tablet.

Metal plates may also have been used, as they were by the contemporary Egyptians and Anatolians, for important personal or state inscriptions. The great treaty between Rameses II and Khattusil, King of the Hittites, concluded in 1279 B.C. or thereabouts, was engraved on tablets of silver. Sir Arthur Evans quotes from Plutarch a very interesting account of the opening by Agesilaos of Sparta of a tomb, said to be that of Alkmene, near Haliartos in Boeotia, which resulted in the discovery of some such tablet, which we can only regard as having been undoubtedly Minoan. The tomb was evidently a Minoan *tholos*, as its legendary attribution shews that it was regarded as prehistoric. Within it were found, Plutarch says, "nothing of the body; but a small bronze armlet and two clay amphoras,

[1] *Scripta Minoa*, p. 44.

[2] M. A. Stein, *Ancient Khotan*, I, p. 344 *ff.*; Barnett, *Antiquities of India*, p. 229.

filled with earth petrified into a solid mass by time, and a tablet of bronze inscribed with many letters, wonderful from their appearance of high antiquity. For nothing could be understood of them, though they came out clearly when the bronze was washed ; they were strange and outlandish in style, most resembling Egyptian. So Agesilaos, they say, sent copies to the King [of Egypt], asking him to shew them to his priests, to see if they could interpret them." Apparently the priest Chonouphis (Kanefer), who was presumably the most learned antiquary at Memphis at the time, spent three days in choosing out of the old books all the most varied kinds of characters he could find, and then came out with a " pat " translation, exhorting the Greeks to form a contest in honour of the Muses, and lay aside internecine strife, which, seeing that he was obviously unable to translate the inscription really, was probably the best thing he could do ; he preserved his reputation for both omniscience and sanctity thereby, for the inscription, which was " like " Egyptian, was obviously not Egyptian, but Minoan, as Sir Arthur Evans concludes.[1]

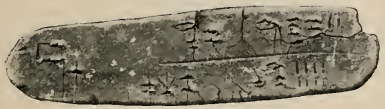
A similar discovery of Minoan inscriptions seems to have been made, Sir Arthur goes on to observe,[2] in the reign of Nero. A Greek book, written not long after that time, purported to contain the memoirs of the Cretan Dictys, who had taken part in the Trojan War. The memoirs were said (according to an ancient device still beloved by novelists) to have been translated from the original documents, written on slips of linden-bark, which were enclosed in a tin chest, and placed in the " tomb of Dictys " at Knossos, which had been exposed to view by an earthquake in the thirteenth year of Nero. Now Crete was actually devastated by an earthquake at that time. And the slips of linden-bark in a tin-lined chest : are not these obviously the Knossian

[1] *Scripta Minoa*, p. 107. [2] *Ibid.*, pp. 108–110.

slips of burnt clay (which do look very like bits of tree-bark) in one of the lead-lined *kasellais* of the magazines? The correspondence is remarkable, and it is evident that an actual discovery of clay tablets was made in the reign of Nero, no doubt as the result of the earthquake, and that on this discovery the author of the Dictys-romance founded his book. He used his "translation," which was at least as faithful, if perhaps not so edifying, as that of Chonouphis.

The oldest form of clay tablet found is a sort of "label," perforated for stringing, or a small bar, also perforated.[1] These are of the Third Middle Minoan period. There are no tablets older than this, but there are at Knossos plenty of clay sealings marked with the impressions of hieroglyphed seals, as early as the First Middle Minoan period. This makes me think that we have here perhaps a hint of the origin of the Minoan clay tablet. It was derived straight from the clay sealing in the Middle Minoan period. As well as writing with ink on skin, papyrus, or pottery, or, perhaps, inscribing wax tablets with a stilus, the Minoans took to making their signs on lumps of clay, as they had been in the habit for centuries of stamping them on clay sealings by means of seal-stones. They first had marked graffito inscriptions on the sealings by the side of the seal-stone impression; the transition to lumps of clay with graffito only and no seal-impressions was natural. The perforation of the earliest tablets is in favour of this view; it represents the hole in the sealing through which ran the fastening-string of the object to be sealed. And the documents for which the new (and no doubt rather inferior) method of writing was used would be such as would actually be docketed together, for which a string-hole would be useful. But very soon the hole was given up, and string no longer used to keep together the tablets, which now, the old sealing-like "label"-

[1] *Scripta Minoa*, Figs. 95, 96.



British Museum

(From a Cast)

Candia Museum

WRITING

1. Cretan Clay Tablets: Knossos
(Scale: 1/2)

2. The Phaistos Disk (obverse)
(Scale: 1/2)

shape and seal-stone-like bar shape being also given up, adopted their final form : a rather long, slip-like tablet (Pl. XXXIII, 1) not so thick or so well-proportioned as the Babylonian. This difference of shape, as well as the theory sketched above of the probable origin of the Minoan tablet, precludes the idea of direct derivation from Babylonia. It has always seemed odd that the Minoans should have adopted the clay tablet from Babylon, but practically nothing else. No culture of the ancient world appears so absolutely un-Babylonian, so completely uninfluenced by the ideas of Euphratean civilization, as does that of prehistoric Greece. The cylindrical form of seal, though, as was natural, common in Cyprus, is very rare in Crete ; and with the exception of one or two imitations of Babylonian cylinder-seals (probably themselves of Cyprian origin), there is nothing Babylonian in Crete. The Minoan tablet, then, though it seems so akin in idea to its cuneiform congeners, had originally no relation to it unless we concede that the sight of cuneiform tablets gave the Middle Minoans the first idea of adopting the sealing as they did ; but this seems most unlikely, as in that case the full tablet-form would have been adopted at once, and not the intermediate forms of the " label " and the bar, which mark the development of an indigenous idea. The utmost that can be conceded to advocates, if there be any, of Babylon in this connexion, is that the first tablet-form may have been reached after consideration of the Mesopotamian shape, which must have become well known to the Minoans by the First Late Minoan period, though it may not have been in the First Middle Minoan period. A single flat tablet of the Third Middle Minoan period was found at Knossos, and another at Phaistos ; but they are proportionately too thin to be imitations of the cuneiform type.

The linear script is a direct simplification of the hieroglyphic, thus exactly corresponding to the Egyptian

hieratic. Its oldest form, in Middle Minoan III, develops in Late Minoan I into a very full script, which Sir Arthur Evans denominates "Class A." This seems to have been in general use in Crete, as we find tablets inscribed with it at Phaistos, Hagia Triada, Gourniá, Zakro, Palaikastro, and near Lyttos, and the Dictaean offering-table is also inscribed with it; while outside Crete it was certainly used in Melos and Thera, where it no doubt accompanied Cretan political control. The Melian vases imported into Crete, no doubt with wine, which were found at Knossos, have scratched inscriptions in the Cretan writing, as have also vases of the same type found in Melos itself; and a common pot from Phylakopi, also inscribed, shews that the script was not put on for Cretan consumption only, but was regularly used in the smaller island.

In the Second Late Minoan period of Knossos the Knossian scribes further evolved a script of their own, a sort of fashionable "palace" or "chancery" hand, which, though it does not differ very much from that of "Class A," yet has characteristics of its own enough to distinguish it as "Class B."[1] It is peculiar to Knossos, like the "Late Minoan II" pottery, and in it most of the Knossian tablets are written. They are often larger than those of "Class A," and more fully inscribed. The latest forms of "Class B" belong to the Third Late Minoan period, at the time of the "partial re-occupation" of the site after the destruction of the great Palace. From the fact that leaf-shaped swords are depicted upon a tablet of this period, we can place it fairly late in the period. Even later, perhaps, is a painted inscription on a large *Bügelkanne* or "stirrup-vase" from Orchomenos in Boeotia. And one or two other instances of writing outside Crete shew that the Cretan script or scripts derived from it had penetrated throughout the Greek world in the

[1] *Scripta Minoa*, p. 38 *ff.*

Third Late Minoan period. These scripts would naturally in course of time come to differ considerably from the parent-style. And nowhere do we find this more distinctly the case than in far-away Cyprus.

In the excavations of the British Museum at Enkòmi were found several baked clay balls with incised inscriptions (Fig. 92) in a character which was then unknown, but was shrewdly conjectured to be an earlier form of the well-known Cypriote syllabary, which was used for writing Greek down to the third century B.C. or thereabouts. The Knossian discoveries have shewn us that this script is simply a local form of the Cretan linear writing, which naturally accompanied the Minoan

FIG. 92.—Hieroglyphic inscription on clay ball; Enkòmi, Cyprus. *British Museum. Scale* ⅔.

culture at the time of the sudden conquest and occupation of the island by the Aegeans. The Cypriote syllabary is, then, a direct descendant of the Minoan script, and, as Sir Arthur Evans points out, the fact that the Cypriote syllabary was evidently not originally intended to be used for writing Greek, or, probably, even for any Aryan language, gives us an interesting hint of (what most of us accept for many reasons) the non-Greek and non-Aryan character of the Aegeans. The fact of the later Cypriote script being syllabic only does not, however, mean that the writing from which it was descended was syllabic only; it bears the same relation (I might point out) to the Minoan as does the purely syllabic Persian cuneiform to the Assyro-Babylonian, in which ideographs and determinatives were used as well as syllabic signs. The Persian script was invented as a

purposed modification of the older cuneiform ; and we cannot doubt that the Cypriote syllabary was similarly invented. And this was probably not long after it became necessary to write in Greek instead of Aegean, just as the Persian script was invented very soon after the necessity arose of writing in Persian, probably about the time of Cyrus, or a little earlier. Again we have a hint of the non-Greek character of the language of the Minoans.

I desire to contribute this mite to the discussion of the question of the extension of the Minoan script beyond the Aegean, which Sir Arthur Evans has initiated, and on which he has brought to bear the full weight of his learning and authority. And now we come to his great conclusion, in which he may need to use the whole weight of his learning and authority if he is to convince many. For, as I have said, he is of opinion that the origin of the Phoenician alphabet, and with it of the Greek alphabet and our own, is at least partly to be found in the Minoan script also. I have no space here in which to recapitulate his arguments, but can only say that personally I think he is right, and shall be surprised if his view is not eventually justified with triumph. The place where this second modification took place was no doubt the Cilician-Syrian coast-land. Minoan influence had long dominated that corner of the Mediterranean, which was probably the seat of a highly civilized folk, probably the Alashiyans of the Egyptian and cuneiform records. And here, in all probability out of the Minoan script, a syllabary was formed for Semitic tongues to use, which eventually became the "Phoenician" alphabet. We can be pretty sure that the Phoenicians had very little to do with its inception ; they were not inventors. But it was they who carried it from Syria to the ends of the Mediterranean, bringing back to Greece, after the dark age of barbarism, the old Minoan script in a totally new

and completely simplified form, which could be used to express the sounds of Aryan Greek as the Cypriote syllabary never could.

We have talked of syllabaries and syllabic signs, of ideographs and determinatives, and many of these terms may convey but a vague meaning to many of my readers. I have implied that the Minoan script, like the older cuneiform, contained not syllabic signs only, but also ideographs and determinatives. We must examine the appearance of the Cretan hieroglyphs and linear signs, and see how this is so. The hieroglyphs on the seal-stones give us the impression of being simply ideographs, signs expressing a single idea: "man," "king," "palace," "fish," and so forth. It is very probable that most of the hieroglyphs were simply ideographs. But, as in Egyptian, many an ideograph must at an early period have been used to represent, not the thing it pictured, but the sound of the word for the thing. Then a "syllabic sign" pure and simple had come into existence, just as if one were to write a figure of a cat for the first syllable of "catastrophe." But supposing we write "catastrophe" in "syllabics," do we not need an ideograph of catastrophe itself to make certain what we are writing about? We nowadays would think such a process redundant, but mankind then was painfully inventing a means of recording its ideas, and had not yet reached, by nearly a thousand years, the simplicity of a plain syllabary, much less that of an alphabet. The inventors of writing left nothing to chance misunderstanding, and so the Egyptians, at any rate, used multitudes of "determinative" ideographs, employed after a word had been spelt out in "syllabics." The Babylonians and Assyrians used a much smaller number of these "determinatives"; their writing was more purely syllabic than the Egyptian. Whether the Minoan cursive used many we do not, of course, know, as we cannot read it; but it seems probable,

from inspection of the tablets, that it did. Certain determinatives can be distinguished, such as that of "woman" and "man," while other ideographs can be guessed to be determinative owing to their position. Some words were represented by simple ideographs; in others an ideograph was no doubt supplemented by a second, determinative, ideograph, limiting and specifying the meaning of the first; and in others the word was spelt out in syllabic signs, usually followed or preceded by a determinative. In "Class A" of the linear script the writing was indifferently from left to right or from right to left, and could go *boustrophedon;* in "Class B," according to Sir Arthur Evans, it was invariably from left to right.[1] The arrangement of the old hieroglyphic signs had been, on seals, very haphazard.

The system of numeration was closely analogous to the Egyptian, and is easily expounded, as follows:—

Units .....) or | = 1;))))) or //// or /// // = 5; *etc.*

Tens ..... ● = 10; ●● ●● = 40; ●●● ●● = 50; *etc.*

Hundreds .... \ or / (A), O (B); \\\\\ or ○○○ ○○ = 500; *etc.*

Thousands .... ◇ = 1000; ◇◇◇ ◇◇ = 5000; *etc.*

Fractions .... V probably = ¼; V V V = ¾.

Example ..... ◇◇ \\\\\ ●● ●●))) V V V = 2543¾.

(Based on Evans, *Scripta Minoa*, p. 258.)

[1] Egyptian was written usually from right to left, but could, if necessary, be written in the reverse direction, and also from top to bottom, a method known to early cuneiform (Sumerian and early Babylonian), but not to Assyrian or, apparently, to Minoan. Later cuneiform (Assyrian and late Babylonian) read always from left to right, the signs, originally written from top to bottom, having been read sideways, till finally they were written sideways.

We may compare this with the Egyptian signs , , , etc., etc. The arrangement is the same in both cases, but the two sets of signs are obviously of quite independent origin. The Egyptian system is obviously a very ancient natural growth, with its picture of the long coil of rope, , for 100, and the thousandfold flower of the field, , for 1000. The Minoan, on the other hand, looks like an artificial creation, and this probability is borne out by the certainly artificial change in the sign for 100, which in "Class B" is changed from , which might easily be confused with , to O.[1]

We have yet to see whether in the second volume of *Scripta Minoa* Sir Arthur Evans will be able to give us any tentative interpretations of the linear inscriptions which go beyond simple guesswork. How it will be possible to do so without any bilingual inscription, let us say in Egyptian and Minoan, to help it is difficult to say. For the seal-hieroglyphics no interpretation can get beyond guesses that this group of signs means "door-keeper," or that "palace of the bull and the double-axe," or that "a voyage of many moons"; guesses that are probably correct in these particular cases, though other suppositions of the same kind are very hazardous, since, as has been said above, in the analogous Egyptian writing at any rate, signs by no means invariably mean what they purport to mean. For instance, we might guess the Egyptian sign to mean a pyramid-tomb or a mountain, whereas as a matter of fact it means "gift," "given," being the conical object representing the gift in the hand of the ideograph , "to give." And many other instances of the same thing might be pointed out, all warnings

[1] Evans, *Scripta Minoa*, p. 256.

against the charming, the engrossing pursuit of guessing the meanings of Minoan hieroglyphs. This much may be conceded: that a group of two or three simple signs on a seal may fairly be taken at its face-value, and a supposition as to their meaning be made which is justified by our knowledge of the characteristics of other hieroglyphic scripts. But all beyond this is in the realm of fantasy.

And in that entrancing realm still remains the famous Phaistos Disk (Pl. XXXIII, 2), which several have ingeniously endeavoured to interpret, naturally without any success. All we can say about this clay disk, with its impressed hieroglyphic signs, which was found at Phaistos, is that it is not Cretan. Its hieroglyphs are quite different from those of the Minoan seals, and bear no relation to anything written that we know in the Aegean area. It is, however, of Minoan Age (Middle Minoan III), and Sir Arthur Evans has pointed out, it is evidently a foreign document, probably from Lycia or Caria,[1] judging from the appearance of some of its signs.[2] Of what it contains we have no idea. Sir Arthur Evans thinks it is a religious chant in honour of the Anatolian Great Mother; it might as well be that as anything else. Whatever it is, it is not Greek; that is quite certain. The method of writing by impressing stamps of certain characters on the clay is most interesting and unexpected. The writer evidently had by him a collection of the wooden types of the signs he wished to use; the Phaistos Disk was indeed a printed document, executed by means of a type-writer! No method analogous is known from Mesopotamia, nor, evidently, did the Minoans ever write in this peculiar way. The method, too, of directing the writing is very curious; the writer began in the centre and turned the disk round and round as he wrote (or rather, stamped)

[1] *Scripta Minoa*, p. 287. [2] See p. 231.

his signs, which therefore unroll themselves on a helical path (marked by an incised line) which comes to an end when the end of the disk is reached. This unique object is certainly the product of a culture distinct from that of the Minoans, the Mesopotamians, or the Hittites, and we may well ascribe it to a local civilization, akin to both Minoan and Hittite, in Lycia and Caria. It is one of the most interesting and important monuments of early Mediterranean civilization.

Of the language or languages that were used by the early Aegeans we know nothing, but we can guess a good deal about them. In all probability they were not Indo-European. Aryan Greek may have been spoken by the stone-using Northerners of Boeotia and Thessaly, but not by the Aegeans and Cretans, or, probably, the Peloponnesians. These, it is probable, spoke a tongue or tongues akin to those of the Lycians and Carians of the neighbouring South-West Asia Minor, which were not Aryan. Of this pre-Hellenic language the Eteocretan of the Praisos inscriptions was probably a survival, and in many Greek words and place-names, especially those with the ending *-νθος*, Kretschmer[1] and Fick[2] have seen non-Aryan and pre-Hellenic elements. Minoan, if it is ever read, will probably be read with the help of Lycian and Carian rather than of Greek; and if Etruscan is ever read, probably with the help of that language also, since Etruscan names and words, such as *Aruns*, *fufluns*, much resemble those pre-Hellenic words in *-νθο(ς)* which Kretschmer and Fick have signalized, while such a name as *Tarqu*[*inius*] is strongly reminiscent of the Anatolian speech-region. Legend makes the Etruscans come from Asia Minor.[3]

The Egyptians have preserved a few names and a few

[1] *Einleitung in die Geschichte der Griechischen Sprache*, p. 370 *ff.*

[2] *Urgriechische Ortsnamen*, 1905; *Hattiden u. Danubier in Griechenland*, 1909.

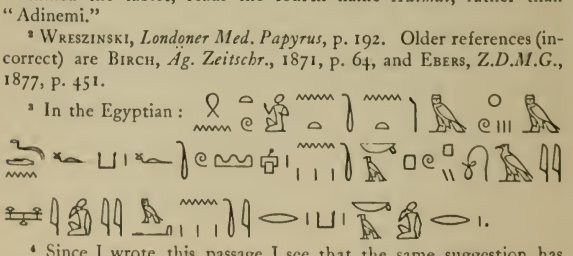
[3] *Anc. Hist. N.E.*, p. 336.

words of the language of Kefti (that is, of the lands of Aegean culture, not necessarily Crete alone). On a writing-board of the XIXth Dynasty (*c.* 1250 B.C.) in the British Museum (No. 5647), is a list of proper names: *Ashahur*, *Nasui*, *Akashau*, and *Adimai*, and the name of a country *Pinarutau* or *Pinaltau*. Akashau is obviously the Philistine *Achish*.[1] The words of the Kefti language are given at the end of a medical papyrus in the British Museum (No. 10059), which contains recipes and incantations;[2] the passage reads, "Charm against the Arab disease in the Kefti language: *santikapupivai-aiman-tirkka-r*."[3] I have divided the words in so far as one can judge they should be divided from the Egyptian, but the first may well be two. The word *tirkka* or *tarkka* is very interesting, and it is probably the well-known Anatolian word *tark-*, which was the name of a god, and often occurs in such Cilician names as Tarkondemos and Trokombigremis, and is paralleled in the Etruscan Tarquinius.[4] The name of *Keftiu* probably represented to the Egyptians the people of Aegean race and civilization, from Crete and the Aegean to Cyprus, and probably included the racially related peoples of Southern Asia Minor, from Lycia and

[1] Spiegelberg, *Assyr. Zeitschr.*, VIII, 384; W. H. Müller, *ib.*, IX, 394; Hall, *Oldest Civilization*, p. 321. Prof. Sethe, who has recently examined the tablet, reads the fourth name *Adimai*, rather than "Adinemi."

[2] Wreszinski, *Londoner Med. Papyrus*, p. 192. Older references (incorrect) are Birch, *Ag. Zeitschr.*, 1871, p. 64, and Ebers, *Z.D.M.G.*, 1877, p. 451.

[3] In the Egyptian:



[4] Since I wrote this passage I see that the same suggestion has been made in Prof. Macalister's recent work, *The Philistines*.

Cilicia.[1] When we excavate that region we may find that its peoples were in art and in costume related to the Aegeans, and formed a bridge between them and the Anatolians, whom we call by the Biblical name of "Hittites." All that we know of them at present is from the Egyptian monuments, which show the Philistines and other tribes which came from the Lycian-Carian region as wearing a waistcloth like that of the Aegeans, but with peculiar modifications, such as the laminated cuirass and the feather head-dress, which were not really Aegean;[2] the feather-crown appears

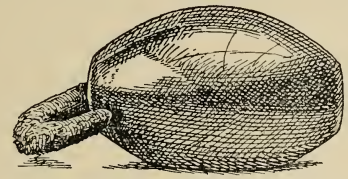


FIG. 93.—Haematite weight with bronze ring.
British Museum. Actual size.

later on Assyrian monuments as characteristic of this region, and is mentioned by Herodotus as specially Lycian (*Hdt.*, VII, 94). It appears too on the Phaistos disk, and marks, with other indications, that relic and its script as belonging to South-West Asia Minor.[3]

As a fitting pendant to the method of writing, the Aegean system of weights and measures might be discussed anew had we much new information on the subject. The matter has, however, been treated in all its bearings by Sir Arthur Evans, in a special article,[4] the conclusions of which will be found summarized by Prof. Burrows on pp. 15–17 of his *Discoveries in Crete*. I illustrate here (Figs. 15, 93) two Minoan weights in

[1] On Mr. Wainwright's view that *Keftiu* means Cilicia only, see p. 58, n. 1.

[2] See p. 245. [3] See p. 245; HALL, *J.H.S.*, 1911, p. 119 *ff.*

[4] *Corresp. Num.*, 1906, pp. 336–67.

the British Museum: one of bronze stuffed with lead, in the shape of a *couchant* ox, and the other of haematite, in half-lentoid form, with a bronze suspension ring. The last feature is rare, but the haematite half-lentoid weight itself is not uncommon, and is found in various sizes down to quite a small weight, evidently used for the weighing of precious metals. The ox-form is significant, as it shews that the ox itself was originally a common object of barter. One of the most usual forms of weight is in the shape of the head or *protomé* of the ox;[1] this we often see represented as a weight on the Knossian tablets. On these the scales are represented; we have discovered no actual pair as yet. When the scales were first invented, whether in Babylonia or in Egypt, it is impossible as yet to say. But it is probable that they came to the Aegeans from the one country or the other, and most probably from Egypt, with which land the prehistoric Greek peoples had such constant relations from the earliest times, whereas with the Babylonians they seem to have had little or nothing to do. That the talent which the gypsum octopus-weight from Knossos represented (see p. 200), and to which the bronze or copper ingots of Hagia Triada also correspond, is the "light Babylonian," does not argue in favour of any original derivation of the Aegean weights from Babylon, since this weight was in common use in Egypt also. It is to Egypt, if anywhere, that we must look for the origin of the Aegean weights and measures.

[1] Karo ("Minoische Rhyta," *Jahrb. Arch. Inst.*, XXVI (1911), p. 249 *ff.*) considers these ox-heads to have been rhytons, like those mentioned on pp. 95, 105, but it seems more probable that they are weights.

CHAPTER IX.—COSTUME, ARMOUR, WEAPONS AND TOOLS; SHIPS; DOMESTIC ANIMALS, ETC.; CONCLUSION

THE works of art which we have described shew us the Minoan costume well. The men with their tall, narrow-waisted figures and ruddy faces seem very like the country Cretans of the present day.[1] The gaily decorated waistcloths which they wore as the chief article of their costume, with a thick belt round the waist, give an outline not so very unlike that of the modern Cretan, with his *βράκαις* or baggy breeches, secured round the waist by a rolled sash (Fig. 94). In fact, so like are some of the ancient developments of the waistcloth (e.g. on the Hagia Triada sarcophagus[2]) to the *βράκαις* that one wonders whether the latter are not really descended lineally from the old costume. The mainland Greeks or "Mycenaeans" of the Late Minoan period, living in a cooler climate, wore a different and warmer costume, consisting of a short-sleeved

[1] Either the wasp-like waist is a national characteristic or the modern Cretans have inherited from the remote past the fashion of inducing a small waist by tight belting, for anybody who travels about the island will notice that phenomenally small waists constantly occur among the men, and combined with the tall, slim figure, reproduce everywhere the Minoan man of the frescoes. The small waists of the paintings are then not merely due to crude drawing; they reproduce, in a somewhat exaggerated form, an actual characteristic of the ancient and the modern Cretans. The resemblance of the modern to the ancient Cretan waist has been noticed by Mr. A. Trevor-Battye (*Camping in Crete*, p. 7).

[2] See p. 173.

254
33
21

210
178
32
21
53

chiton or jacket-shirt, girt in at the waist (Fig. 95).[1] Great personages, both men and women, wore also a long, short-sleeved, waisted gown or overcoat reaching to the ankles.[2] The men may have worn this over the short *chiton*. The women seem to have worn it when engaged in outdoor exercise or in certain ritual ceremonies.[3] Probably it was always worn by charioteers, for the same reason that the modern coachman wears a warm coat, and for this purpose it survived, somewhat altered, in classical days, when we see it worn by the bronze Delphian charioteer, by a young man (who used to be taken for a woman) on a well-known Athenian relief, and by another charioteer on a relief fragment (by Skopas) in the British Museum Mausoleum Room, as well as generally by charioteers on the vases. The careful cut of this garment, to fit the figure, in the Mycenaean representation, is very noticeable; evidently the Cretan ideal of the narrow waist had to be followed by the mainland "Mycenaeans." This modern-looking costume was partially adopted in Crete in the Third Late Minoan period, when the Mycenaean modification of the Cretan culture had extended to the islands. We see the waisted overcoat side by side with the breeches-like waistclout on the Hagia Triada sarcophagus (Pl. XXVIII). And later on we see Cyprian grandees on the great vases from Enkòmi,[4] wearing the same sleeved gown. The purely Minoan costume of Crete seems to have comprised nothing exactly like this, but we may be sure that an overcoat of some kind

FIG. 94.—Clay sealing with representation of two men in baggy waistclout or breeches (βράκαις ?); Crete. *Enlarged.*

[1] This is now known from the newly-discovered Tirynthian frescoes (RODENWALDT, *Tiryns*, II).

[2] *Ibid.*; and Fig. 74, above. [3] See pp. 175, 190.

[4] PERROT-CHIPIEZ, III, Fig. 526; *cf.* Fig. 51, above.

FIG. 95.—Fresco (restored) from Tiryns, shewing Mycenaean male costume (Late Myc. = L.M.III).

was worn by the Cretans on the mountains in cold or wet weather, and there is little doubt that it was a stiff capote of rough hair, standing out from the shoulders like that of an Albanian or that of a Sphakiote Cretan to-day; we seem to see this being worn by the common soldiers on the "Chieftain Vase" or by the old village headman on the "Harvesters Vase" from Hagia Triada,[1] or by a man on a seal impression from the same place.[2] In the last two cases it descends to the knees, and has a hanging fringe. The waistcloth also sometimes was ornamented with a hanging fringe of a kind of translucent gauze-material or network. It was gaily coloured and ornamented with bands and rosettes. The northen *chiton* also had coloured bands and borders.

FIG. 96.—Clay figurine; man of the Middle Minoan period, Crete. From Petsofà. *Scale* ½.

In the Middle Minoan period the clothing of the women was distinguished by a sort of high ruff-like collar at the back of the head, which, conjoined with ample skirts, gives them an oddly Elizabethan effect (Fig. 97). Later on, golden tiaras were worn, which, conjoined with the free coiffure of a knot at the back of the head and hanging curls at the side, make the ladies seated at the windows of the palace in one of the Knossian frescoes look like beauties of the court of the Empress Eugénie. Their dress, with its low-cut front, padded sleeves, and ample skirts, so utterly different from the attire of the Greek woman in classical days, makes their appearance as extraordinarily modern as that of the men is ancient—or future. This modernity ("*ce sont des Parisiennes*," said a Frenchman) has been a theme of wonder and discussion for ten years. On the details of the women's dress a mere man can add nothing to the discussion in Miss Abrahams' book on *Greek Dress*,

[1] See p. 62; Pl. XVII. [2] EVANS, *Scripta Minoa*, Fig. 14.

that of Professor J. L. Myres (assisted by his wife) in the *Annual of the British School at Athens*, Vol. IX, p. 369 *ff.*, and that of Dr. Rodenwaldt in *Tiryns*, II. And on the subject of the male costume I may refer the reader further to Chapter II of my *Ancient History of the Near East*. The present book, too, should perhaps rather deal as much as possible with actual archaeological remains, and of remains of ancient Aegean costume we have, naturally, next to none. The earth of Greece, subject to much rainy weather, does not preserve fabrics as do, on the one hand, the dry soil of Egypt or Turkestan, on the other, the peat of Denmark and North Germany. We have no actual specimen of textiles like those from Egypt, far less actual costumes like those in the Museum of Northern Antiquities at Copenhagen. All we can hope to find are those adjuncts of costume which were made of metal. The golden ornaments of women are known from Troy and Mochlos in the earlier period, from Mycenae in the later. The Mycenaean diadems or tiaras (Fig. 4, 3),[1] though of thin metal as befits mere funereal objects, no doubt preserve the appearance of the actual diadems worn in life and shewn in the Knossian and Tirynthian frescoes.[2] Then there are the hairpins, which are often

FIG. 97.—Reconstructed clay figurine; woman of the Middle Minoan period, Crete. From Petsofà. *Scale* ½.

[1] SCHUCHHARDT, *Schliemann*, Figs. 148–153.

[2] Smaller diadems were probably worn also by the men.

found. These, however, as we have seen, cannot always be assigned to women. I have already described the elaborate Minoan male *coiffure* fully in my *Ancient History of the Near East*, p. 50, to which I refer the reader on the subject, and will only say here in connexion with the pins that while the Minoan men ordinarily wore their hair simply tied at the neck, or in a pigtail, sometimes it was coiled up in a knot at the top of the head (Fig. 96; Pl. XV, 2), as the Burmese men wear their hair now, or was rolled up round it (Fig. 98). To secure the knot hairpins would be necessary. The gold hairpins from the Fourth Grave at Mycenae, which may

FIG. 98.—Clay head of a man; Mochlos, Crete. *Scale* ⅔.

plausibly be assigned to men, are either simple with a mere button or catch at the end, or have on them a head in the form of such an animal as an ibex,[1] an adornment as appropriate to a Mycenaean gentleman's hairpin as a horseshoe or a fox to the tie-pin of a modern English hunting man. A simple hairpin of twisted gold, with one end bent over to form a catch, found in the Royal Tomb at Isopata in Crete,[2] probably belonged to a man. The hairpins that certainly belonged to women, found in Grave III at Mycenae, were much larger and more elaborate, one having a stem of silver (a great rarity then) and a golden head in the shape of a

[1] SCHUCHHARDT, *Schliemann*, Fig. 217.
[2] EVANS, *Prehistoric Tombs*, Fig. 129.

woman squatting amid lotus-plants,[1] worked in a style very like that of one of the objects of the Aeginetan Treasure (p. 59). Other pins had balls of quartz or rock-crystal for heads. And from other sites we have bronze women's pins with long and heavy heads in the shape of a series of knobs and disks. The early pins from Mochlos had heads worked in the shape of daisies and other flowers (Fig. 41).[2]

In the Middle Minoan period, judging from the Petsofà figurines, the women wore their hair done up in a kind of horn, projecting forward (Fig. 97). This ugly fashion was followed by Cyprian men in the Late Mycenaean period.[3] In the Late Minoan period the Knossian ladies replaced it by the free and natural *coiffure* which is so oddly modern in appearance (Fig. 99).

FIG. 99.—Woman from a Knossian fresco (L. M. II). *Original half life-size.*

Gold wire spirals are found in various tombs. They seem to have been used by both sexes for holding the hair in position and keeping it tidy.[4] The prince on the "Chieftain Vase" (Pl. XV, 3) wore his hair confined by horizontal bands, no doubt of gold, for this purpose; we can see one over his head in front of the ears to keep the hair from the forehead, and two to hold it at the back.

Earrings, of which many golden ones have been found, seem to have been worn by both sexes; those of the Knossian Cupbearer were of silver, judging from the painting.

Fibulae are only found in the latest tombs and town-ruins. They were a Northern device, not needed by Mycenaean clothing, which was tied or buttoned, not

[1] SCHUCHHARDT, Fig. 172. [2] *Mochlos*, Figs. 41, 42.
[3] PERROT-CHIPIEZ, iii, Fig. 526. [4] HELBIG, *Homerische Epos*, p. 166 *ff.*

skewered. They came in somewhat in advance of the invasion of the "Illyrians" or Thesprotians from the North, which brought iron and cremation into Greece.[1] One or two, of the simplest form, have been found in late buildings at Mycenae.[2] They are, of course, of bronze.

The little plaques of gold, found in the Mycenae tombs,[3] representing all manner of objects: spiral coils, octopods, butterflies, gryphons, cats, little figures of the goddess with doves,[4] and so on, were in all probability not, as was formerly thought, intended to be sewn on to robes, but were ornaments of the wooden coffins in which the bodies were placed. Similar objects—a golden toad, a bull's head, a crouching lion—were found in the graves of Kakóvatos.

Golden objects of the same kind on a smaller scale were used as beads, and these often have additional inlay decorations of coloured glass paste—red or blue. Often such beads were made entirely of the blue paste, or *kyanos;* these have often been found, especially at Ialysos. A very characteristic form of these *kyanos* beads seems to represent a wave or a lock of hair curling up at one end. Others are like a papyrus-flower or a "stylized" scallop-shell (Fig. 100).

Necklaces of gold and amethyst, amber, and cornelian are found; the beads are of various types—lentoid, barrel-shaped, polydiscoidal, flower-shaped, etc. (Fig. 100). Pendants of the same kind were strung among the beads, as was usual in Egypt, and we can see considerable Egyptian influence in these small objects of decoration. Imported Egyptian necklaces were prized, as we know from the Enkòmi finds.

They were probably worn by both sexes; the king

[1] *Ancient History of the Near East*, p. 73 *ff.*
[2] Tsountas-Manatt, Figs. 57, 58.
[3] Schuchhardt and Tsountas-Manatt, *passim.*
[4] See p. 150.

with the butterflies in the Knossian relief-fresco has a necklace representing flowers about his neck. Bracelets were a common ornament. There are the heavy man's bracelet from the Fourth Grave at Mycenae, and the twisted pair on the wrists of the personage holding a "sacral knot" in a Phylakopi fresco.[1] Of the engraved seals and finger-rings, which were apparently as important articles of Minoan dress as they were of that of the Babylonians, we have already spoken.

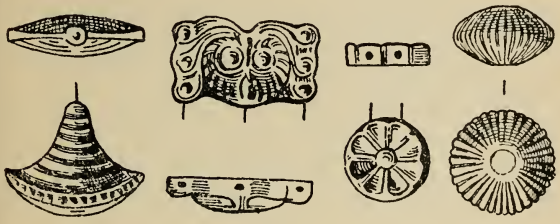


FIG. 100.—Mycenaean beads; Zafer Papoura. 1–3, gold (*Scale* $\frac{3}{4}$); 4, paste (*Scale* $\frac{1}{1}$).

Of such things as shoes or sandals we know nothing, as leather is as perishable as cloth in the soil of Greece. From the paintings and figurines, it looks as if the men wore a high white leather boot, exactly like that still in use in the island; and sometimes a sandal attached by straps to the lower part of the leg.

Combs of ivory were used; one has been found at Troy.[2] And bronze mirrors, mounted in handles of ivory, carved in a style to which we have already referred,[3] occur in later graves, as often in those of men as of women. In the shaft-graves at Mycenae there are

[1] *Phylakopi*, Fig. 61.
[2] DÖRPFELD, *Troja und Ilion*, Fig. 389.
[3] P. 202.

none, so that Sir Arthur Evans has supposed that their use was not introduced from Egypt until the end of the First Late Minoan period.[1]

Turning to matters of costume and the toilet exclusively male, we may note that the testimony of the frescoes to the clean-shaven habit of the men is borne out by the discovery here and there of bronze razors.[2] Obsidian razors, which could have a feather-edge as fine as that of any modern steel blade, were, however, probably more generally used. The true Minoan wore no hair upon his face, unless he were an elderly peasant; we have the portrait of a rollicking whiskered old boor on the Hagia Triada "Harvesters Vase." The Mycenaean, however, liked to wear a beard and a moustache occasionally, as we see from one of the gold masks from Mycenae (Fig. 101),[3] and on a Mycenaean fresco,[4] and towards the end of the Bronze Age the later Greek custom had come in of wearing a pointed or wedge-shaped beard with no moustache[5] (*κείρεσθαι τὸν μύστακα καὶ πείθειν τοῖς νόμοις*).[6]

Such things as staves (especially notable is the Dragon-sceptre of Mycenae)[7] are found in many tombs; but, naturally, the most important objects in all male burials are the weapons. Of armour we cannot say much, as very little has been recovered. The breastplates of thin gold found in the shaft-graves may be funerary reproductions of armour,[8] but this is uncertain, and nothing like a helmet was found with them. The Minoan warrior usually wore no body-armour, though occasionally on some Knossian tablets there

[1] Evans, *Prehistoric Tombs*, p. 115.
[2] *Ibid.*; Tsountas-Manatt, p. 166.
[3] Schuchhardt, Fig. 254.
[4] *Ath. Mitt.*, XXXVI, Pl. XII, 2.
[5] Tsountas-Manatt, p. 167.
[6] The proclamation said to have been made by the Spartan ephors on their accession to office.
[7] P. 57. [8] Schuchhardt, Fig. 256.

occur lists of undoubted bronze cuirasses among other warlike objects.[1] Some sort of laminated tight-fitting cuirass was worn by the Lycians and Philistines in the thirteenth century B.C., if we may judge from the Egyptian representations,[2] and this is worn by an

FIG. 101.—Gold mask from a grave at Mycenae; bearded man. *Athens Museum. Scale* ⅓.

"Arimaspian" slaying a dragon, on an ivory mirror-handle from Enkòmi in Cyprus.[3] But we may doubt if this is really Minoan or Mycenaean; the Knossian cuirasses may be imports or tribute. The Greek armour described in the Homeric poems is post-Mycenaean. For the Minoan warrior, his huge shield,

[1] EVANS, *Scripta Minoa*, p. 42.
[2] W. M. MÜLLER, *Asien u. Europa*, p. 374.
[3] See p. 202; Fig. 80.

ἠΰτε πύργος, like that of Palaiphetes, was his chief defence. It was usually, but not always, in the shape of a figure-of-eight (Fig. 103; Pl. XXXII, 2). On the dagger-blade of the lion hunt (Mycenae, Grave IV) and on the silver vase-fragment of the siege (Pl. XXXI, 1), and on a gold ring, we see also a tall shield with straight sides and a curved top—not unlike a Roman form, but larger. This shield was carried by a single shoulder-sling when not borne in front. For head-defence, helmets of metal, with ear-pieces, also very Roman-looking, were used. A floating crest was often worn. Sometimes the helmet becomes strongly conical, so as to resemble the high cap worn by Anatolian deities; but this is apparently only the helmet of a god. Helmets are not usual at all in Crete; warriors are constantly depicted without them; we see them fighting and hunting with nothing to protect their heads but their hair, over which, no doubt, the heat of a helmet would be, in Crete, almost unbearable. But on the colder mainland helmets seem to have been worn usually. Sometimes they have a knob at the top, like some Assyrian helms.[1] A common form is seen on a recently-published fresco at Mycenae (Fig. 69),[2] and on three small ivory heads, all alike, found at Spata, in Attica, at Mycenae, and at Enkòmi in Cyprus, respectively.[3] It has been taken to be a leather cap with boar's teeth sewn upon it in rows, and this may be right (a number of boar's teeth which have been taken to belong to such a helmet have been found at Zafer Papoura in Crete), but it is, at any rate, just as probable that the supposed teeth are semilunar scales of metal. A peculiar feature is the very long cheek-guard which, on the ivory heads, looks as if it were fastened beneath the chin. A similar helmet which looks as if it were made of horizontal rolls of leather and has a crescent on its top is

[1] *Ath. Mitt.*, XXXVI, Pl. XI.

[2] *Ibid.*, Pl. XII.

[3] The Mycenae head is illustrated by Tsountas-Manatt, Fig. 85.

seen on a small faience fragment found at Mycenae.[1] On account of the crescent this has been compared with the crescent-topped helmet worn by the Shardana mercenaries of Egypt about the same time, and the comparison may be good, though the Shardana helmet had no cheek-pieces. The Arimasp slaying the dragon on the ivory mirror-handle from Enkòmi[2] has a somewhat similar helm without cheek-pieces. But at the same time he wears the peculiar "Philistine" cuirass, which does not seem to be Aegean, and one wonders whether this odd helmet, which seems to be worn also by the non-Aegean Shardana, is really Greek or Aegean at all, at any rate in origin, and whether the ivory heads and the Arimasp slaying the griffin can properly be regarded as works of Minoan art. May they not rather be products of a closely allied art on the Asia Minor coast imported into Greece?[3]

However this may be, helmets of this type were worn by the mainland Greeks, though they never adopted, so far as we know, the Philistine cuirass. And the peculiar feathered head-dress of the Philistines, which was characteristic of Lycia and South-West Asia Minor,[4] does not seem to have been worn by any Aegeans. We see it represented, probably, on the silver vase-fragment of the siege from Mycenae (Pl. XXXI, 1),[5] but the men who wear it are possibly foreigners. Its occurrence in the non-Aegean picture-script of the Phaistos disk shows that it is foreign. We do not see it on any fresco or on

[1] Schuchhardt, *Schliemann*, Fig. 198.

[2] *Excavations in Cyprus*, Pl. I.

[3] *Manchester Egyptian and Oriental Journal*, II (1913), p. 41.

[4] Herodotus, VII, 92.

[5] *J.H.S.*, 1911, p. 120. Dr. Rodenwaldt does not think so (*Tiryns*, II, p. 204 n.), but as he merely denies the fact, without giving any reasons for his denial, I can only repeat that in my opinion the warriors on the siege-fragment are wearing the Philistine head-dress. If not, they have their hair cut *en brosse* and standing up on end, which is, at least, improbable.

any Greek pottery till the Decadence, and in Cyprus it only occurs on the ivory box from Enkòmi, which is post-Mycenaean, and goes with the bronze tripod of Dipylon type and other late objects that were found there.[1]

FIG. 102.—Bronze greaves; Enkòmi. Cyprus. *British Museum. Scale* ⅓.

For the protection of the legs greaves or gaiters were worn. We have an actual bronze pair from Enkòmi in the British Museum, with stiff wire loops through which they could be laced up at the back of the leg (Fig. 102). Their Minoan date is not absolutely certain, as they may belong to the very end of the Bronze Age, or even be a little later; but we have proof that the Minoans did use greaves, or at any rate protective gaiters, in the representations of a Mycenaean fresco (Fig. 69), and in the golden gaiter- or greave-holder found in Grave IV at Mycenae. The band of the holder was fastened round the leg just below the knee, and a vertical strip hanging down in front held up the greave or gaiter by means of a loop which fastened on to a button or peg on the greave.

FIG. 103. — Seal-impression; man carrying shield and spear. Knossos *Twice size.*

The true Minoan, the man of the figure-of-eight shield (Fig. 103), carried spears, sometimes of the usual type, but often of remarkable and very beautiful form; and a very characteristic sword, straight, long, thin, and rapier-like, intended for the thrust alone and useless for cutting (Fig. 104). It is quite different from the

[1] *Excavations in Cyprus*, Pl. I; see p. 24, above.

heavy broad-bladed sword which is given to the Shardana by the Egyptian artists,[1] or from the "leaf-shaped" weapon of the Bronze Age people of Central Europe, which was brought into Greece by the Northern invaders. We have splendid specimens of it, and of the smaller broad-bladed dagger that was used contemporaneously with it, from the graves at Mycenae and Ialysos, and in Crete and Isopata and Zafer Papoura.

The history of the development of this sword has already briefly been referred to. It was developed from the dagger, which continued to be used side by side with it. The Early Bronze Age people of Crete, the Cyclades, and Cyprus, used a copper weapon which looks more like a broad spear-blade than a dagger (p. 47). It may have been either or both—fastened by its tang to a small handle for use as a dagger, to a long one for use as a spear. First the spear proper differentiated itself from the dagger, and then the dagger lengthened and became the sword. We can well suppose that these developments were first made in Crete, and that the possession of better weapons contributed largely to the establishment of Cretan control in the islands and on the mainland in the Middle Minoan period.

The wonderful ornamentation of the daggers found at Mycenae has already been described. That of the gold pommel of one of the long swords is a beautiful example of chasing. The swords from Grave V are good examples of the typical Minoan rapier-type, but both these and those from Ialysos in the British Museum

[1] One of these mighty broadswords was discovered in 1910 at Bêt Dagin, near Gaza, and is now in the British Museum. It had occurred to me that this weapon, originally regarded as a great spearhead or halberd, was in reality a Philistine sword of "Shardana" type, and recently Dr. Burchardt, of Berlin, when visiting the Museum, at once came to this conclusion, and I think he is undoubtedly right. The sword is illustrated here (Fig. 109), and is to be published by Dr. Burchardt and myself in the *Proceedings of the Society of Antiquaries*.

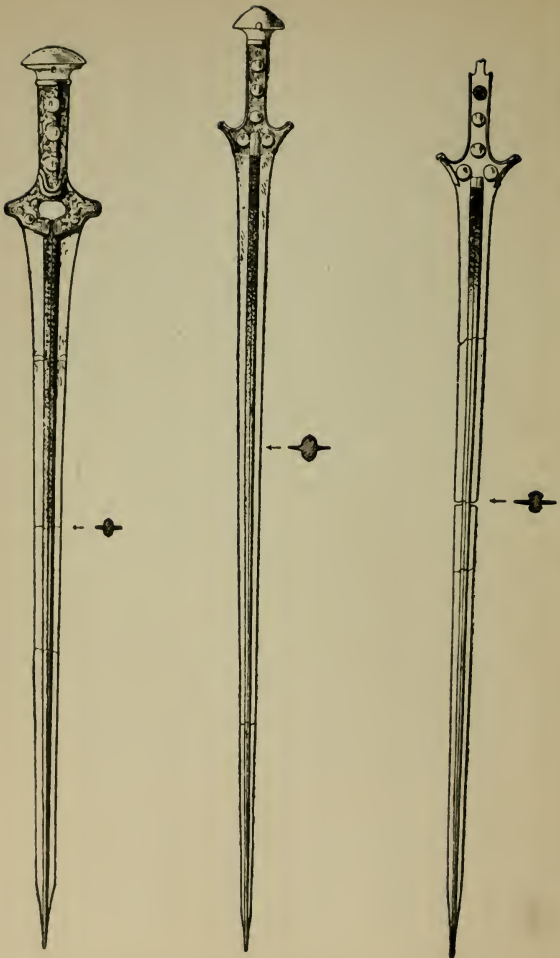


FIG. 104.—Minoan bronze swords from Zafer Papoura (L.M.III). *Candia Museum. Scale*, 1. $\frac{1}{4}$; 2. $\frac{1}{6}$; 3. $\frac{1}{5}$.

have now been passed in interest by the splendid examples discovered in the tombs at Zafer Papoura (Fig. 104). Two of these are over 90 cm. in length. The hilts of these swords were plated with gold and decorated with incised groups of lions and ibexes (Fig. 105), and their pommels were of ivory or of translucent

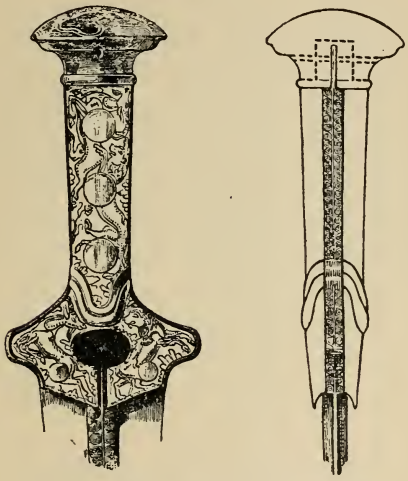


FIG. 105.—Hilt of bronze sword; Zafer Papoura. *Scale* $\frac{2}{3}$.

banded agate. A similar pommel of crystal has been found at Knossos, and one of white faience in a tomb in the Lower Town at Mycenae. The guards of the hilt are either simply cruciform or are horned, the ends of the guard projecting upwards; a characteristic Late Minoan form, found also in daggers, which occasionally have the horned hilt prolonged and turned over in a hooked form. These splendid weapons were hung upon

belts, probably of leather covered with gold. Two or three specimens of the gold portion of belts of this kind have been found in the Mycenaean shaft-graves (unless

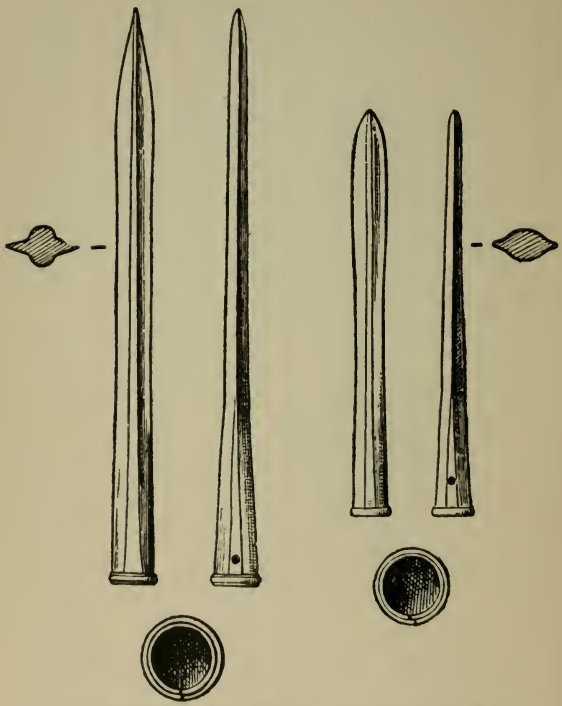


FIG. 106.—Minoan bronze spearheads; Zafer Papoura (L.M.III). *Candia Museum. Scale c.* ½.

they were originally made of gold only, for funeral purposes). Sheaths were used. The daggers were carried in the waist-belt, as we see from the clay figurines

found at Petsofà (Fig. 96) and from Egyptian representations of the Keftians.[1]

The transition from the tanged to the socketed spearhead probably took place in the Early Minoan Age. Those found at Zafer Papoura (Fig. 106) and at Ialysos are all socketed. The heads of some are of an ordinary type, but others, and especially two or three from Zafer Papoura, are of a really beautiful shape, with a delicately curved line resembling that of Japanese spearheads.

The arrowheads used were of more ordinary shape, though a double-hooked type has been found at Zafer Papoura (Fig. 107). Flint or obsidian seems to have been used for arrows in quite late times. Large stores of

FIG. 107.—Minoan bronze arrowheads; Zafer Papoura (L.M.III). *Candia Museum. Actual size.*

bronze arrowheads were found at Knossos, with, near by them, inscribed tablets with arrowheads in hieroglyphs on them and numbers, evidently lists of the number of arrowheads in the neighbouring stores, which is given as 8640 in all.[2] No bows have been found; the horn of which they were made is extremely perishable, and even in Egyptian tombs has always suffered from the lapse of time. But again on tablets we have lists of ibex-horns evidently for the manufacture of bows.[3] At Knossos was discovered a fragment of a small steatite relief of an archer.[4] The reputation of the Cretan archers in later times may well have been a very ancient one, and the

[1] In the tombs of Senmut and Rekhmara; *cf.* the representation, WAINWRIGHT, *Liverpool A.A.A.*, Vol. VI, Pl. XV, 13, and Pl. XVII, and my note on *B.S.A. Ann.*, X, p. 156.

[2] *Scripta Minoa*, p. 44. [3] *Ibid.* [4] *B.S.A. Ann.*, VI, Fig. 13.

Minoan archers may be imagined to have been masters of their craft. The Northern Greeks were not great bowmen, and we can see a certain contempt for the bow as rather an effeminate and un-Achaian weapon in Homer. The Cretan slingers were later as famous as the archers; and we see slingers in Minoan days on the Siege vase-fragment (Pl. XXXI, 1).

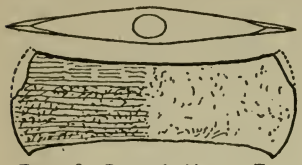


FIG. 108.—Bronze double axe; Troy. *Scale* ¼.

The hatchet-like war-axe beloved of the Egyptians seems not to have been used, and even the national double-axe (Fig. 108) was a tool rather than a weapon. A round-bladed war-axe with three rings for the staff was found at Vaphio.[1] According to Sir Arthur Evans the throwing-stick was known, as in Egypt, and was used in war, whereas in Egypt it was confined to the chase.

The Egyptian curved scimitar was never imitated; the ἄρπη and μάχαιρα of the classical Greeks were later introductions. Towards the end of the Minoan period we see the leaf-shaped bronze sword of Central Europe beginning to make its appearance (in representations on Knossian tablets); in post-Minoan days,

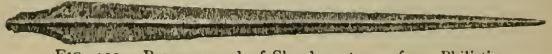


FIG. 109.—Bronze sword of Shardana type; from Philistia. *British Museum. Scale* 1/10.

it and the broadsword of the Shardana (Fig. 109) replaced the Minoan rapier. In Homeric days the leaf-shaped short sword of bronze was, no doubt, the usual weapon. (Soon afterwards the metal was changed from bronze to iron; and the classical Greek sword and spear-head were, of course, always of iron.)

[1] TSOUNTAS-MANATT, Fig. 94. In form it is rather like an Egyptian type of the Middle Kingdom.

Such were the weapons of the Minoans; of their tools the razors have already been mentioned. Small knives are found, some with bone or ivory handles. Larger ones, of coulter shape, with wooden handles, are known. A curious knife, that looks like a leather cutter, is made of an old broken sword-blade ground down (Fig. 110).[1] Bronze saws have been found, notably at Gourniá,[2] which was a museum of the ordinary tools of the Late Minoan period. One of the most interesting finds at Gourniá was a stone mould for chisels, nails, and awls, made of schist, which had been broken and most carefully mended with strips of bronze.[3] The weapons and tools were made in these moulds and hammered out of the metal. The "double axe" was, of course, common, as on other Minoan sites; also the typical Minoan flat celt. Rough stone celts were still used, and pestles, mullers, burnishers, and other objects of the same kind were naturally of stone. Bronze was used for nails, needles, and awls, but also bone, which had been the usual material for such tools since Neolithic days, when it was common. Ivory was, no doubt, only used for the finest tools.

FIG. 110.—Bronze knife; Crete. *British Museum.* *Scale* ½.

Of the finer tools with which the Minoan artists produced their toreutic and glyptic triumphs, we have none that can be certainly identified. But of the humbler instruments which helped to make the works of art that archaeology has recovered for the twentieth century to see, we have been able to say a little, though among them there is more that is very remarkable.

It remains only to say that of musical instruments

[1] In the British Museum. From Hagios Vasilis, near Viano, in Crete.

[2] *Gourniá*, p. 34, Pl. IV. [3] *Ibid.*, p. 32, Pl. III, 67.

the Minoans used the lyre (made of ibex-horns) and the double flute (Hagia Triada sarcophagus), as well as the sistrum (Harvesters Vase), which last was an importation from Egypt.

It is generally held that the Aegean culture was the result of an uniform development from Neolithic times. We have nothing to show any intrusion of any other culture-system which in any way suddenly modifies or alters the course of this development, which is that of the civilization of a single people raising itself on its own lines from Neolithic barbarism. Its first development from the static condition in which it had existed for many centuries in the Neolithic stages was sudden, and the dynamic impulse which was given by the acquisition of metal speedily carried it to the great height of cultivation which we have seen. When the impulse was exhausted it remained again in a static condition of high but stagnant culture till degeneration set in and the infusion of a new ethnic element from the North, bringing with it the use of a new and superior metal—iron—broke it up. The general characteristics of the Aegean culture at the height of its development will have been grasped in the preceding pages. It yields to none that was contemporary with it, and hardly to any that came after it, in variety and complexity of development and in the high level to which it followed the arts. Of all civilizations of the world it was in some ways the most artistic, the most aesthetic. Of its moral character we can have but slight knowledge, but luxury was great, and probably contributed not a little to its downfall. Cruelty, too, judging from the gladiatorial games and bull-leaping sport, was not absent. The life of the people was, however, passed amid circumstances of considerable amenity. Of that of the common people we know but little. But the arts of agriculture,

husbandry, the chase, and fishing, especially the latter, afforded more variety of life than was possible to the *fellahin* peasantry of Egypt or the Orient. The Aegean was then as now pre-eminently a sailor; he must have been one of the first that "went down into the sea in ships." For him the sea had its terrors as well as its lure (see Fig. 111); but nevertheless he sought out its mysteries in his frail barks. We have rough sketches of vessels in the Cyclades in the first age of culture-development; and on the seal-stones of the Middle

FIG. 111.—Seal-impression with scene of a sailor attacked by a sea-monster; Knossos. *Enlarged* 3 *times.*

Bronze Age we see them represented (Fig. 91*a*). For the later age the Knossian tablets have shewn us what the Minoan vessels were like—open-decked boats with a single mast and bank of oars (Fig. 50). The early Cycladic boats have beaked prows;[1] those of the later period are round-bowed; perhaps these are merchant vessels. The Aegean was also a hunter, as we know from his pictures of the chase and his worship of the deities of venery. His wild-goat or ibex, the *agrimi* (see outer cover and Fig. 112 below), was a splendid quarry, and in mainland Greece the lion may still have fallen to his sword (*cf.* the Mycenae inlaid blade). He

[1] Illustration in DUSSAUD, *Civilisations Préhelléniques*, Fig. 197.

domesticated the dog for the chase, and imported the horse and chariot from the East. The goat was probably then, as now, the most useful domestic animal that the Greek possessed, but he had cattle also, and the bull was for him the highest embodiment of force, the emblem of the male godhead. The Bull and the other emblem of strength associated with him—the "double axe"—remain for us the chief symbols of the wonderful culture whose highest expression is seen in the marvellous Palace of Knossos, the Labyrinth of the Minotaur, revealed to us by the work of the man to whom more than even to his forerunner, Schliemann, we owe our knowledge of Aegean Archaeology.

The most important remains of ancient Aegean civilization have been found in the island of Crete, and there the whole story of this civilization can be studied from its beginning to its end. Crete was the main focus of the Aegean culture. It came to the mainland of Greece from Crete, and in Greece was really, if not exactly a foreign at any rate a non-indigenous culture. In classical times, when the new Greek culture had grown up in Ionia and in Greece, Crete became a backwater of barbarism. The stream of civilization, ebbing and flowing from the cities of Asia and the colonies of the North and of the Euxine through Greece proper to Magna Graecia and Sicily, passed by her unheeding. Crete was without commerce, for she led nowhere; and without arts, because she was without commerce. For then, and until the Romans vulgarized the world, energy meant art as well as commerce; commerce meant art as well as energy. But in the earlier time it was natural that Crete should have been the breeding-place, the focus, of art and civilization. A great civilization sprang up in the Aegean Isles, and it was natural that in the largest and most fertile island of all its growth

should have been most marked, and that the fully developed culture which evolved itself in Crete should have absorbed the less developed culture of the smaller isles, and eventually have forced its way on to the mainland. Crete was a favoured land for the development of the civilization whose seeds had been planted in it in the Stone Age. "Crete," says Mr. Hogarth,[1] "is large enough to be a little world in itself, compounded of mountain and plain, highland and lowland slopes. With its high relief arresting the burden of the sea-breezes from south and west, and preserving snow far into the spring, it is a land that flows, at such times as man will suffer it to flow, with wine and oil. . . . Man has done much to destroy the gifts of the south wind, but he cannot harm the carpet of flowery vegetation which comes up on the land, as the snows melt, and survives the year through in the higher valleys. A serrated and shaggy wall, rising from a wind-tormented, inhospitable sea, and interrupted by three main depressions, of which two are low; little locked pans and verdant valleys, hidden inland behind spurs; spontaneous vegetation wherever the north wind is shut away—such is the impression left by Crete." Crete is the wall of the Aegean, which shuts off the territory of the Aegean civilization from the South, but this wall is not entirely without sally-ports on the outer side, the bay of the Messará, the beach of Hierapetra, the coves of the eastern butt-end. And these were probably the landing-places of the first inhabitants. Westward the wall becomes tremendous at Sphakiá, and forbids all landing, and to this fact may be due the circumstance that the Cretan civilization seems to have grown up entirely in the central and eastern parts of the island; it grew up in the lands which the first-comers had occupied, which they reached at once from the possible landing-places on the south coast. We

[1] *The Nearer East*, p. 122.

have no proof yet of culture in Western Crete even in the most palmy days of the Minoan culture, and it may be that the Sphakian and even the Khanian region on the north coast behind it remained always in a lower state of civilization. The fact, too, that the two chief mountain-seats of Cretan religion, Ida and Dikté (Lasithi) are situated in the centre and east of the island, while the White Mountains of the west have no part in Minoan religion seemingly, and certainly none in Greek legend, to which Ida and Dikté were almost as familiar as Olympus, points in the same direction. Ida and Dikté bound on either side the great central plain of the Messará, which the first colonists would immediately occupy after their arrival on the shores of the best landing-place on the southern coast; they became naturally the homes of their gods. The White Mountains, behind the impassable wall of Sphakiá, had none to venerate them. It is in the Messará that we must place the beginnings of Cretan and Aegean culture. Eastward, expansion was easy past the slopes of Dikté, and subsidiary swarms no doubt reached the isthmus-gate of Hierapetra also. The "Eteocretan" people of the Sitia mountains, the "Eastern Dikté" to the east of the isthmus, may originally have been distinct from the people who came from Africa, and have come from Anatolia at an even earlier period. This is pure conjecture; at any rate they became entirely "Aegaeized" or "Minoized."

The isles of the Cyclades led the Cretans in later days by easy stages to Greece, and there the plains of Argolis of Messene, and Lakonia, of Boeotia, and eventually of Thessaly, saw the development of the Mycenaean-Minoan culture of the mainland. The Minyae drained, it is said, the Boeotian marshes, where Scottish energy has again given a province to Greece by the reabolition of the totally needless Kopaïs-swamp. That these Minyae were Minoans from Crete, that the

Kadmeians of Boeotian Thebes were Minoans rather than always improbable Phoenicians, is more than probable. Here, as in Crete, a broad plain allowed civilization to develop. This plain was reclaimed from the unguided and neglected forces of Nature by the art of a civilization which had perhaps already learnt how to dig and ditch and drain the water-logged upland basin of Lasithi in its native Crete.

Before the coming of the Cretan-Aegeans we have no proof that the Peloponnese, at any rate, had produced a culture worthy of the name. Established in Greece proper the Aegean civilization gained a new centre from which it could spread its power and influence over the lands and isles of Greece.[1]

Just as the probable primitive colonists from Africa[2] had been compelled by the configuration of Crete to land and make their home in the central and eastern parts of the island, so the configuration of the mainland invited the Aegeans to land and make their colonies in Greece at the head of the chief sea-gulfs, such as the Argive, the Saronic, and eventually the Pagasaean, behind which were the plains which they occupied and cultivated. The mountain-chaos of Central Greece prevented much further advance by land, and the barrier of Othrys seems to have barred all northern progress, which could be effected, as it eventually was, only by sea. The Aegean culture was a maritime one, the civilization of a sailor-people of the islands, and its

[1] On the expansion of the Minoan culture to Greece proper, and its development there, see *Anc. Hist. Near East*, p. 56 *ff.*

[2] For the view that (with the possible exception of the "Eteocretan" people of the Sitia district, east of the isthmus, who may have come from Anatolia) the ancestors of the Minoans came from the early hive of human energy and progress in the Nile-valley, see *Anc. Hist. Near East*, pp. 34 *ff.* I have said nothing with regard to it in the present work, as it belongs as yet to the realm of archaeological theory, and this book is confined to the statement of known facts as disclosed by the excavations.

progress was rendered possible only by the sea. By the sea it lived, and when a stronger people coming from the North, and bringing with it the use of iron, dispossessed the Aegeans of the exclusive control of the seaways, their power collapsed, and with it the great civilization of which we have described the remains. The smaller islands became what they really are—mere barren rocks, incapable naturally of supporting any population beyond that of a few fishermen and goat-herds; and Crete itself sank back into the position it was henceforth to hold, that of a little world just sufficient for itself, and incapable of holding further the position of dominance which its geographical position had caused it to take at the beginning of things, and its sea-given prosperity had enabled it to hold through so many centuries of splendid culture-development.

FIG. 112.—Fresco of a goat (Late Myc. = L.M.III). From Tiryns. *Athens Museum.*

APPENDIX

MANY references to authorities have already been given in the text, but the following short bibliography may be useful.[1]

General Works.—*Schuchhardt, *Schliemann's Excavations* (1893); *Tsountas-Manatt, *The Mycenaean Age* (1897); Ridgeway, *The Early Age of Greece* (1901); Hall, *The Oldest Civilization of Greece* (1901); *Burrows, *The Discoveries in Crete* (1907; 2nd edition, 1908); *Dussaud, *Les Civilisations Préhelléniques dans le Bassin de la Mer Egée* (1910; 2nd edition, 1914); *Boyd-Hawes, *Crete the Forerunner of Greece* (1909; 1911); Mosso, *Palaces of Crete* (1907); *Dawn of Mediterranean Civilization* (1910, open to criticism); also the articles of Evans and Hogarth on **Crete* (Ancient) and **Aegean Civilization* in the 11th edition of the *Encyclopaedia Britannica*. Two popular compilations are Lagrange, *La Crète Ancienne* (1908) and Baikie, *Sea-Kings of Crete* (1910).

Historical Connexions.—Meyer, *Geschichte des Altertums*, II (2nd edition, 1908), pp. 677 *ff.*; Hall, *Ancient History of the Near East* (1913), Ch. II; Fimmen, *Zeit und Dauer der Kretisch-mykenischen Kultur* (1909); Xanthoudides, Ἱστορία τῆς Κρήτης; Hogarth, *Ionia and the East* (1909).

Religion.—Hogarth, art., *Aegean Religion*, in Hastings' *Dictionary of Religion and Ethics*, Vol. I; Evans, *Mycenaean Tree and Pillar Cult* (*J.H.S.* XXI).

Pottery and Vase-Painting.—Evans, *Essai de Classification des Epoques de la Civilisation Minoenne* (1906); Miss E. H. Hall, *The Decorative Art of Crete in the Bronze Age* (1907); Reisinger, *Die Kretische Vasenmalerei* (1911, open to criticism).

[1] The works starred are those of most general value at the present time.

Frescoes.—Rodenwaldt, *Ath. Mitt.*, XXXVI, pp. 198, 221 *ff.*; *Tiryns*, II (note by N. Heaton on technical points); Fyfe, *Journ. R.I.B.A.*, X, p. 101 *ff.*

Art.—Besides the above, Evans, *Album of Minoan Art* (forthcoming); Pernier and Karo, *Antiquités Crétoises* (phot. Maraghiannis; 1907 and later).

Gems, Seal-stones, Hieroglyphic System, etc.—Evans, *Cretan Pictographs* (*J.H.S.*, XIV, p. 270 *ff.*); *Further Discoveries of Hieroglyphic Script* (*J.H.S.*, XVII, p. 327 *ff.*); *Scripta Minoa* (1909).

Weights and Measures, etc.—Evans, *Corresp. Num.*, 1906.

Excavations.—Argos (Aspis): Vollgraff, *B.C.H.*, 1904, 1906, 1907; Cyclades: Dümmler, *Ath. Mitt.*, XI (1886); Bent, *J.H.S.*, V, 47; Blinkenberg, *Aarbøger af det Kgl. Nord. Oldskrift Selskab*, 1896; Edgar, in *Phylakopi*, p. 80 *ff.*; and (on Pelos) *B.S.A. Ann.*, III, p. 35 *ff.*; Tsountas, Κυκλαδικά, Ἐφ. Ἀρχ., 1898, p. 137 *ff.*; 1899, p. 73 *ff.*; Cyprus: Myres and Ohnefalsch-Richter, *Cyprus Museum Catalogue* (1899); Murray, A. H. Smith, and Walters, *Excavations in Cyprus* (1900); Evans, in *Journ. Anthrop. Inst.*, 1900, p. 199 *ff.*; Poulsen, in *Jahrb. Arch. Inst.*, 1910; Markides, *B.S.A. Ann.* 1913. Dictaean Cave: Hogarth, *B.S.A. Ann.*, VI, p. 94 *ff.*; Gourniá: Boyd, *Gournià* (*American Exploration Society, Free Museum of Science and Art, Philadelphia*), 1912. Hagia Triada: Halbherr, Pernier, Paribeni, Savignoni, *Rendiconti dell' Accademie dei Lincei*, XII *ff.*; *Mem. R. Ist. Lombardo*, XXI; *Monumenti Antichi*, XIII *ff.*; *Ausonia, passim.* Isopata: Evans, *Prehistoric Tombs* (*Archaeologia*, 1905). Knossos: Evans, *B.S.A. Ann.*, VI–XI (1900–1905). Mochlos: Seager, *Excavations in the Island of Mochlos* (*Ann. S.A.*, 1912). Melos: Cecil Smith, Edgar, Mackenzie, and others, *Phylakopi* (*H.S.*, 1904). Mycenae: Schuchhardt, *Schliemann's Excavations*, and various papers by Tsountas, Stais, Stamatakis, and others in the Ἐφ. Ἀρχ. Orchomenos: Bulle, *Orchomenos* (*Abhandl. k. bayr. Akad.*, XXIV; 1907). Palaikastro: Bosanquet, Dawkins, and others, in *B.S.A. Ann.*, VIII, IX (1902, 1905). Phaistos: Halbherr, Pernier, and others, as Hagia Triada. Pseira: Seager, *Excavations in the Island of Pseira* (Univ. Pennsylvania Free Museum, *Anthrop. Publ.*, III, No. 1, 1910). Sphoungarás: E. M. Hall, *ibid.*,

1912; Vrokastro: *id. ib.*, 1914. Thessaly and Boeotia: Tsountas, Προϊστορικαὶ Ἀκροπολεῖς Διμηνίου καὶ Σέσκλου (Athens, 1908); Sotiriades, Ἐφ. Ἀρχ., 1908; Wace, Droop, and Thompson, *Prehistoric Thessaly* (1912). Thebes: Keramopoullos, Ἐφ. Ἀρχ., 1909, p. 57 *ff.*; 1910, p. 210 *ff.* Tiryns: Schuchhardt, *Schliemann*; Rodenwaldt, *Tiryns*, II (*Deutsche Arch. Inst.*, 1912). Troy: Dörpfeld, *Troja und Ilios* (1902). Zafer Papoura: Evans, *Prehistoric Tombs*, Zakro: Hogarth, *J.H.S.*, XX.

From the above list the reader will gain an idea of the literature of the subject.[1]

[1] Abbreviations

Abhandl. k. bayr. Akad. *Abhandlungen der kgl. bayrischen Akademie.*
Am. S.A. *American School at Athens.*
Ath. Mitt. *Mitteilungen des deutschen archäologischen Instituts in Athens.*
B.C.H. *Bulletin de Correspondance Hellénique.*
B.S.A. Ann. *Annual of the British School at Athens.*
H.S. *Society for the Promotion of Hellenic Studies.*
J.H.S. *Journal of the Hellenic Society.*
J.E.A. *Journal of Egyptian Archaeology.*
P.S.B.A. *Proceedings of the Society of Biblical Archaeology.*

ADDENDUM

To the chapter on the excavations should be added a mention of the recent excavation by the British School at Athens of the remains of a Mycenaean town near the Menelaïon of Sparta (R. M. Dawkins, *B.S.A. Ann.*, XVI, pp. 4–11), and the further work at Phylakopi in 1911 (Dawkins and Droop, *ibid.*, XVII, p. 1 ff.). The renewed work at the Kamárais Caves has been mentioned. This year (1914) the School under Mr. Dawkins has been excavating in Lasithi, near the Dictaean Cave.

To the description of Minoan pottery should be added mention of the combination of gold and faience in a cup (*B.S.A. Ann.*, VIII, p. 25, Fig. 11), and of the remarkable painted jar with papyrus-plant stems in relief (*ibid.*, IX, p. 139, Fig. 88), both from Knossos.

In the preface I have inadvertently omitted to thank Dr. Xanthoudides for the loan of the photograph of the Koumása figurines, Pl. XIV, 4–6.

INDEX

Aigina, pottery, 87 ; treasure, 59
" Alkmene, tomb of," 218
alphabet, origin of, 224
altars, 153
Amathus, 24
American excavations, 36
Amorgos, 24
Anatolian connexions, 146
Antiparos, 24
Aphidna pottery, 87
Aphrodite, 150
Apollo, Cretan, 148
archery, 251
architecture, 112 ff.
architectonic style of decoration, 98
argonaut-design, 90, 95
Argos, 40 ; excavations at, 75 ; pottery, 87
armour, 242
arrows, 251
Artemis, 149
Arvi, gorge of, 149, 156
Aspis. *See* Argos
Athene, 149
Atreus, treasury of, 9, 15, 164
Attica, discoveries in, 17, 21
axes, 252

Babylonian influence, 221
baths, 125, 126
beads, 240
beehive-tombs. *See* tholoi
Bent, J. Th., discoveries of, 24
bird-designs, 103, 106
" Blue Boy " fresco, 185
" Boar-hunt " fresco, 193
boats, 255
bone-carving, 206
boots, 241
Bosanquet, Prof., discoveries of, 36
Boyd, Miss (Mrs. Boyd-Hawes), discoveries of, 36
" Boxers vase," 33, 61
bracelets, 241
" bridge-spout " vases, 82
British Museum, 15, 22, 23, 199, 247
British School at Athens, 25, 36
Britomartis, 150
Bronze Age, 47 ff. ; figures, 67
Bügelkanne, 82, 94, 103
bull-worship, 153, 256 ; -leaping, 29, 61, 153, 176, 188 (fresco) ; -relief, 199 ; bull's head relief, Knossos, 197 ; -rhytons, 57, 60 ; -weights, 232 ; ivory roundel, 204
Burrows, Prof., 29, 231

cat-fresco, 32, 185 ; dagger-blade, 57
cauldrons, 67
caves, sacred, 145, 156
celts, 46, 253
Cesnola, di, 23
Chaironeia, 40
Chalandriane, 47, 138
chalcolithic period, 45, 72, 76, 113
chamber-tombs, 161, 170
chariots, 142
" Chieftain vase," 33, 63

chiton, 234
chryselephantine work, 204
Cilicia, 203
cinerary urns, 176
cist-graves, 159, 160
civilization, Aegean, 254
cloisonné work, 57
combs, 241
Conway, Prof. R. S., 35
conventionalization in art, 103
copper, 24, 44, 67
costume, 83 ff., 231, 233 ff.
Crete, characteristics of, 256; neolithic period in, 45; civilization of, *passim*
crystal, 57, 205
cuirasses, 243, 245
"Cupbearer fresco," 29, 95, 188
Curium, vase from, 104
Cycladic periods, 4; antiquities, 24; pottery, 70, 75, 84; stone figures, 200; culture, 46
cylinder-seals, 221
Cyprus, 22, 24, 44, 47, 104 ff., 176; Cypriote script, 223

daggers, 47, 247; inlaid, 57
dances, religious, 152
dating of archaeological evidence, 3
Dawkins, Mr. R. M.: discoveries of, 36, 112
decadence of Mycenaean culture, 108
Delphic oracle, 148
Demeter, 150
designs, spiral, marine, etc., 92, 97, 103, 200
diadems, 237
Dictaean cave, 28, 34, 156
Dictys, memoirs of, 219
Dikté, 34, 258
Diktynna, 150
Dimíni, 16, 40
disk. *See* Phaistos
distemper-painting, 178
"Dolphin fresco," Phylakopi, 86
doors, 122, 135
Dörpfeld, Prof., 17, 39, 113
double axe, 92, 152
dragon-sceptre, 57
Dromos of tomb, 158
Droop, Mr., 41
duck-vases, 71
Dümmler, Prof., 24

earrings, 239
Egypt, discoveries in, 22; Egyptian objects, 20, 60; designs, 71; connexions, 174, 216
Enkòmi, 23; tombs, 176; treasure, 60; pottery, 105, 196; ivory-carving, 203
Ephesus, 60
Eteocretans, 258; language of, 34, 35
Etruscan connexions, 172, 229
Evans, Sir A. J., discoveries of, 27; chronology of, 3; on sealstones, etc., 212 ff.; on origin of alphabet, 224

faience, 105, 115
fibulae, 232
figurines, Koumása, 201; Knossos, *ibid.*; Petsofà, 84
"filler" or "strainer" vase, 94
floors, painted, 181
flower-vases, stone, 66
"Flying-fish fresco," 100, 184
fortification, 128, 135, 136, 140
Forsdyke, E. J., 88, 94, 103
fresco-painting, 178 ff.; frescoes, Knossos, 29, 186, 187; Hagia Triada, 31; Tylissos, 186; Tiryns, 39, 100, 134, 188; Mycenae, 187; Thebes, 196; miniature, 186; relief, 187
funerary customs, 158, 173 ff.
furniture, 144

γαλόπετραις. *See* seal-stones
gaming-board, Knossos, 204
garderobes, 126
gates, 126, 135, 140
gems, 207
German excavations, 39
Gha, 138
gods, 19, 147, 151
gold, 51; gold-work, 60, 69, 240
gorges, sacred, 145, 146, 156
Goulàs, 34
Gourniá, 36, 53, 90, 116
graves. *See* tombs
greaves, 246
"Gryphon-fresco," 125, 180
Gurob, 22
gypsum, 120, 232

haematite, 232
Hagia Triada, 31, 130, 199; frescoes, 185; vases, 33, 60; sarcophagus, 172 ff.; sphinx, 201
hairdressing, 13, 238
hairpins, 12, 238
Hala Sultan Tekke, 23
Halbherr, Prof., discoveries of, 27
Hall of the Double Axes, Knossos, 125
"Harvesters vase," 33, 62
Hatzidakis, Dr. J., discoveries of, 38, 65, 67, 186
helmets, 244
hieroglyphs. *See* writing
Hissarlik. *See* Troy
Hoeck, Dr., on Crete, 26
Hogarth, Dr. D. G., discoveries of, etc., 34, 36, 60, 119, 150
"Homeric" palace, Mycenae, 19; Tiryns, 131; Hagia Triada, 131; Troy, 134
"horns of consecration," 153
horses, 142
houses, 112 ff.; models of, 115
household gods, 154
hunting, 255; frescoes, 188; goddesses, 157

Ialysos, 7, 102
Ida, Mt., 34, 258
Idaean Cave, 34
ideographic writing, 255
ink, 217
inlay, metal, 57
intaglios, 206
iron, 69; age, 177
Isopata, royal tomb, 162; L.M.I tombs, 170
Italian discoveries, 31
Italy, connexions with, 107
Ithaka, 16, 39
Iuktas, Mt., 148
ivory at Phaistos, 206; Knossos, 201; Enkòmi, 202

Kadmeians, 259
Kahun, 22
Kakóvatos, 39, 100, 204
Kalochairinos, M., 26
kalyx (vase-form), 103
Kamárais cave and pottery, 22, 78, 156
Kampos, 21
kantharos (vase-form), 88
kasellais (καστέλλαις), 30, 124
katavothrai, 142
Kavousi, 149, 177
Keftiu, 58, 95, 230; language, *ibid.*
kernos (vase-form), 84
Khamaëzi, 113
Klytaimnestra, Treasury of, 14, 166
knives, 253

Knossos, 26, 29, 45, 101, 119 ff.; frescoes, 185 ff.; reliefs, 197; tablets, 213; script, 222; styles of art, 96; town, 119; tombs, 177
Kopaïs, Lake, 142, 258
Koumása figurines, 38, 51, 201
Kouretes, 147
kyanos, 198, 204

Labyrinth, the, 152
lamps, 66, 111
language, 229
larnakes, 162, 172
lead, 232
"leapers," ivory, 30, 201
Lianokladhi, 42
light-wells, 122
Lion Gate, Mycenae, 9, 137; -hunt, dagger, 57
lustrous vase-paint, 73
Lycians, costume, 231
lyre, 254

Macalister, Prof. R. A. S., 43
Mackenzie, Dr. Duncan, 31, 43
Magasa, 112
magazines, 124, 136
Maket-tomb, 102
marine designs, 92, 200
Mattmalerei, 76, 87, 101
Megaron, 132; "Queen's," at Knossos, 125
Melos, 25; pottery of, 74, 84, 87, 100; writing, 222
Menelaïon, Sparta, 264
metal, introduction of, 72; metallurgy, 53
Miamu, 112
Milatos, 172
Milchhöfer, Prof., 26
miniature-frescoes, 186
Minos, Prof. Ridgeway on, 4
Minoan periods, 3; Early, 72; Middle, 54, 77, 79; Late I, 80, 89, 96; II, 96; III, 101
Minotaur legend, 153
Minyae, 258
"Minyan" ware, 76, 88, 134
Minyas, Treasury of, 16, 166
Mirrors, 241; -handles, 202 ff.
Mochlos, 37, 48, 69
moulds, 253
Mouliana, tomb, 177
Murray, Mr. A. S., discoveries of, 23
musical instruments, 254
Mycenae, 8 ff.; town, 14; acropolis, 19; fortification, 136; frescoes, 187; pottery, 103; shaft-graves, 100; stelae, 199; golden vases, 55
Mycenaean periods, 5
Myres, Prof. J. L., 22, 35, 84

necklaces, 240
Neolithic period, 40, 44, 70, 76, 112

obsidian, 46, 65
octopus-design, 90, 98, 200
Olympia, 39, 113
oracles, 149
Orchomenos, 16, 113, 166; pottery, 76; houses, 113; writing, 222
oval houses, 113

painting, 71, 179 ff.
palaces, 118 ff.; "Western," at Knossos, 130; mainland, 131
"palace-style," 96
Palaikastro, 35, 92
Palamidi, 21
Palestine, Mycenaean pottery in, 106
Parian marble, 48

Paribeni, Sig., discoveries of, 32
Pernier, Sig., discoveries of, 32
Petrie, Prof. W. M. F., discoveries of, 22, 102
Petsofà, 35; figurines, 84
Phaistos, 31, 120; tablets, 222; disk, 33, 228
Phalasarna, 38
Philistines, 107, 231, 245; pottery, 43
Phoenician writing, origin of, 224
Phylakopi, 25, 113; pottery, 74, 100; frescoes, 184; walls, 138
pictographs. *See* writing
pilgrimage, 156
pillars, 123
pit-caves, 170
pithoi, 26, 30, 32, 78, 98, 124; pithos-burials, 170
plant-designs, 92, 103
plaster, 180
polychromy, 54, 77
Poseidon, 149
pottery, 70 ff., 110
Praisos, 34
praying figurines, 67
"priestess" fresco, 194
"Proto-Corinthian" ware, 108
Pseira, 37, 98, 115; pottery, 92; relief fresco, 187
Pylos, 39
Pyrgos (Paros), 113

reliefs, stone, 183, 198, 199; stucco, 183, 197; -frescoes, 187, 188
religion, 146
Rhea, 151
rhytons, 57, 60, 95, 105, 232
Ridgeway, Prof., on Minos, 4
rings, 69
ring-walls, 138
roads, 42
Ruskin, John, 7

"sacred knot," 155
sarcophagi, 172
Samikon, 39
sanitary arrangements, 125
Sarobina, roundel of, 203
Savignoni, Prof., 32
saws, 253
sculpture, 51, 200
scales, 232
Schliemann, H., discoveries of, 8 ff.
Schnabelkanne (vase-form), 50, 73
Schuchhardt, Prof., 28
Seager, R. B., discoveries of, 36, 37
seal-engraving, 206; -stones, 206; -pictographs, 216
sealings, clay, 220; Zakro, 36, 157, 208
Sesklo, 40
shaft-graves, 11, 167
Shardana sword, 247, 252
shield, 19, 244
ships, 255
shrines, 154
Sicily, Mycenaean pottery in, 107
Sidon, 22
"siege"-vase, fragment, 57
signaries, 214
signets, 206
silver, 53, 57
sistrum, 254
slingers, 252
Smith, Mr. A. H., discoveries of, 23, 24
snake-goddesses, 30, 82, 155
Sotiriadis, Dr., discoveries of, 40
Spata, 17
spears, 246, 251
sphinx, 201, 203
Sphoungaràs, 170
spirals, 48, 74, 94, 200
Spratt, Capt., 31
stairways, 120

staves, 242
steatite, 48, 60 ff.
stelae, 10, 199
stone vases, 48, 200
stratification of antiquities, 3
stucco, 178
" swallow " fresco, 86
swords, 246, 252
Syra, 24

tablets, clay, 213; origin, 220; ancient discoveries of, 218 ff.
talent, 232
Taramelli, Sig., discoveries of, 112
ταυροκαθάψια, τὰ, 61, 153
Tell el-Amarna, 2, 102
temples, 145
" Theatral Areas," 119, 124
Thebes, frescoes, 196
Thera, pottery, 86
theriomorphism, 150, 157
Thessalian discoveries, 40; pottery, 76; houses, 113; Mycenaean, 107
tholoi, 14, 159, 164 ff.
Thompson, Mr. M. S., discoveries of, 41
Thorikos, 21
throne-room, Knossos, 125
" Throne of Minos," 144
throwing-stick, 252
Thunder Hill, 177
Tiryns, 9, 18, 39, 126, 129, 131, 182; frescoes, 188, 190; pottery, 76
tombs, 158 ff.
towers, 140
transition styles (M.M.III–L.M.I), 80
" treasuries," 14, 16
trees, sacred, 152
triglyph-design, 198
Troy, 16 ff., 19, 21, 107, 139, 146
trumpets, sacred, 155
Tsountas, Mr., 20, 28, 40
Tylissos, 38, 65, 67; frescoes, 186

Urfirnis, 76, 87

Vaphio tombs, 16, 20; cups, 56
Vasiliki, 113; ware, 73
Velchanos, 147, 151
" villa," royal, at Knossos, 130
votive offerings, 156

Wace, Mr. A. J. B., discoveries of, 41
Wainwright, Mr. E. A., 58
waistcloth, 233
walls, 138, 140
Walters, Mr. H. B., discoveries of, 23
" warrior-vase," 14
water-demons, 157
weapons, 46 ff., 246 ff.
weights, 200, 231
windows, 120
woodwork, 199, 203
writing, 207 ff.

Xanthoudides, Mr. S., discoveries of, 38, 177

Zafer Papoura, 104, 169, 247
Zakro, 36, 157, 208
Zeus, Cretan, 147

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